THE ART AND MAKING OF

STAR WARS THE FORCE UNLEASHED

WRITTEN BY W. HADEN BLACKMAN & BRETT RECTOR • FOREWORD BY HAYDEN CHRISTENSEN

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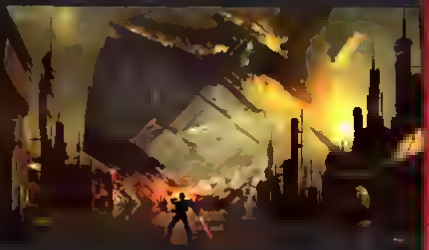
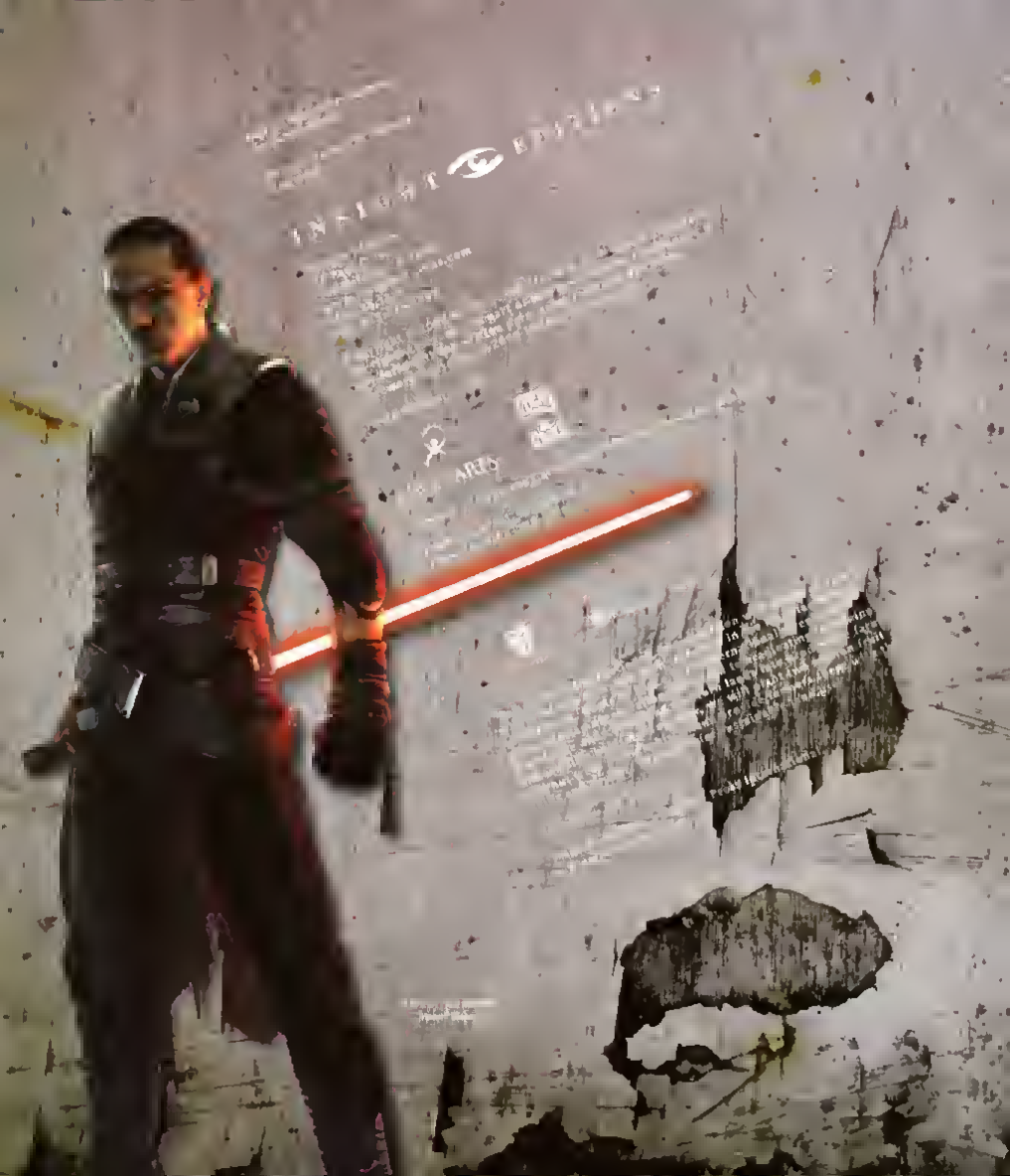


The Art and Making of Star Wars®: The Force Unleashed™ chronicles the four-year development of the groundbreaking video game by LucasArts—both a milestone in game design and the eagerly anticipated next chapter in the *Star Wars* saga.

Full of stunning concept art, character studies, screenshots, and diary entries from the creators, this behind-the-scenes book on the making and art of the game explores how the lore of the *Star Wars* universe gets written and how games are built from concept to console.

Project lead W. Haden Blackman and assistant producer Brett Rector offer an exclusive insider take on what it was like to design and develop this unprecedented game, including a detailed tour of unused game concepts, conversations with George Lucas about the project, creative solutions to the challenges facing game designers today, and an accessible account of the innovative technology integral to this thoroughly next-gen gaming experience.

At the core of The Force Unleashed's cutting edge gameplay is a vision of the Force as you've never seen it before. Taking full advantage of new technologies exclusive to LucasArts and Industrial Light & Magic, this action-packed game provides a visceral experience of what it must be like to smash, shatter, and splinter one's way through alien and Imperial worlds in a quest to find personal redemption and bring balance to the Force.



The Art and Making of

STAR WARS THE FORCE UNLEASHED

W. Haden Blackman and Brett Rector

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Foreword

The first time I met George Lucas for the role of Anakin Skywalker in the *Star Wars* movies, I was invited to Skywalker Ranch. This was no small thing. When I was twelve or thirteen, my parents, who were becoming more and more aware of my interest in movies, coincidentally had given me a book called *George Lucas: The Creative Impulse*. I was already a fan of *Star Wars*, but upon reading this book, I learned about some of George's other creative endeavors. His Skywalker Ranch and LucasArts and their video games were two that really struck me.

Now I was eighteen years old, walking up the steps of the Main House at Skywalker Ranch, going to meet George Lucas. Although I was a little overwhelmed, I guess I did something right, because not long after that trip I received the call that still seems surreal. George was offering me the chance to portray Darth Vader. Almost ten years may have passed since that day, but it's still hard to believe that I'm fortunate enough to be part of the *Star Wars* saga.

I "lived" in the *Star Wars* universe only for a short time, as long as it took to produce *Attack of the Clones* and *Revenge of the Sith*. At Skywalker Ranch and at the Letterman Digital Arts Center in San Francisco, hundreds of people (who I think must be some of the luckiest in the world) get to devote their time to telling new *Star Wars* stories and working with George on new ways to bring *Star Wars* to fans like you and me.

For the past four years, many of them have been working on *Star Wars: The Force Unleashed*, a truly remarkable addition to the saga.

You're about to take an amazing journey through the creation of this incredible video game, which is every bit as fascinating and sometimes perilous as the route the movies took during their production. As you'll find out, whether it's a movie or a video game, creating a new *Star Wars* story is never easy, but it is worthwhile.

LucasArts has been making amazing video games for more than twenty-five years, but this one really is special. It's the first time that a video game has directly addressed what many call the "*Star Wars* canon." The story of *The Force Unleashed* picks up where Episode III left off (one of my favorite moments—how could putting on the real Darth Vader mask not be a favorite moment?!) and leads directly into Episode IV.

Although I've been playing video games for many years now, this is the first one I want to play not just to get the full-on gameplay experience, but to actually watch and enjoy the story it tells. The talented team that created *The Force Unleashed* has spent perhaps as much time worrying about getting the story right as perfecting the gaming experience.

All in all, this is an extraordinary experience—whether you look at it as "just" a game or as a *Star Wars* event.

We're on the cusp of major changes in the entertainment world. Just as movies, radio, and TV did before them, video games are becoming a permanent part of the entertainment landscape. I don't think anyone's really surprised anymore to hear me say I stayed home to play a game—and as games become more and more sophisticated (and *The Force Unleashed* lets you do some really incredible things), there's going to be an even bigger change.

As you explore the genesis of *The Force Unleashed* in these pages, I think you're going to see why it's such an exciting time to be a gamer *and* a *Star Wars* fan.

There's a saying around Lucasfilm that "*Star Wars* is forever," and *The Force Unleashed* certainly shows that there's an amazing future ahead for an epic story that is a very special part of my life.

Hayden Christensen

September 2007

BATTLE DAMAGE DARTH VADER
Amy Beth Christenson

THE SAGA CONTINUES
CHAPTER ONE

JETTEN SPACE
Greg Knight

VADER ON KASHYYYK
Amy Beth Christenson

The Next Chapter....

With the release of *Star Wars* Episode III *Revenge of the Sith* in May 2005 it appeared that the *Star Wars* saga was complete. All six chapters in George Lucas's mythic tale had been released, finally revealing the full story behind Anakin Skywalker's journey from slave boy to Dark Lord to redeemed villain.

But even with the two film trilogies finished, the *Star Wars* series was far from over. In the spring of 2006 Lucasfilm revealed that the next chapter in the epic saga was in development—not as a film, novel, or comic book, but as an interactive video game being created at LucasArts in collaboration with George Lucas. Titled "*Star Wars*: The Force Unleashed," the game proved to be one of the most ambitious *Star Wars* stories ever told, bridging the dark years between Episodes III and IV, showcasing the rise of the Empire, and including key characters—such as Princess Leia and the Emperor—in pivotal roles. It transports audiences to a wide range of fantastic locations, both familiar and new, and provides greater insight into the character of Darth Vader. It also introduces audiences to a fresh cast of characters, including an enigmatic hero known as "Darth Vader's Secret Apprentice," and reveals one of the saga's most important moments: the birth of the Rebel Alliance. But as with all of the *Star Wars* films these details are just the backdrop for a hero's personal journey. The Apprentice's story takes him from a hunt for the last of the Jedi, at Vader's behest, to his destiny as the galaxy's first Rebel. It is a tale of adventure, heroism, self-sacrifice, and ultimately, redemption.

The announcement that the saga would indeed continue was met with a great deal of excitement and anticipation. But what fans and the media did not know was that the game, already well over a year in development by the spring of 2006, did not actually begin as "The Next Chapter" in the *Star Wars* Saga."

VADER BATTLE
Amy Beth Christenson

EARLY "ART OF THE REBELLION" CONCEPT
Greg Knight

Searching for a Concept

Developing and releasing The Force Unleashed was a three-year journey that involved literally hundreds of people from over a dozen disciplines, including design, art, engineering, production, testing, finance, business affairs, marketing, public relations, sales, consumer insights, and other areas. The development team's work began in the fall of 2004, when a handful of us were offered the opportunity to build LucasArts' next major *Star Wars* game. In those days, the team consisted of fewer than twelve developers—engineers, designers and artists.

Our first phase of development consisted of brainstorming a wide range of high-level concepts around which we might build the game design and story. At that time, we were operating under only a handful of constraints:

- The game obviously needed to deliver an authentic *Star Wars* experience. Through exhaustive research, LucasArts has developed a series of filters that help us understand how fans define a true *Star Wars* experience. Chief among these is the demand for an epic story that includes relatable characters, comedy, key *Star Wars* icons and some sort of human struggle. The team embraced these filters, and every concept began with a strong story or character "hook."
- We were also intent on providing players with things they had never seen before in a game, so we focused on using physics and artificial intelligence (AI) in new ways to achieve this goal. With the advent of the new, more powerful gaming consoles, LucasArts developed a strategy of creating games based around simulation-driven gameplay, essentially using advanced simulations rather than hand-animated or pre-scripted events to help drive the experience. As a team, we firmly believed that simulation-driven design would provide unpredictable and authentic payoffs for everything the player did in the game, and would enable players to interact with environments and characters in new and increasingly interesting ways.
- Finally, we also knew that the game had to have huge mass-market appeal. The *Star Wars* brand immediately brings a wide audience, and all of these potential players would need to find the game accessible, easy to pick up and play, engaging and fun.

With these early requirements—a mass-market *Star Wars* game featuring simulation-based

EARLY "RISE OF THE RAKATAN" CONCEPT
Greg Knight

gameplay—we began brainstorming hundreds of content and gameplay hooks. There were very few rules to this brainstorming phase, and hooks could revolve around characters ("the Darth Maul game") gameplay features ("weapon customization"), plot setups ("What if the Jedi and the Sith formed an alliance?"), Star Wars time periods ("Knights of the Old Republic era"), and even unanswered questions from the saga ("Who was Darth Plagueis?"). The early brainstorming literally spanned the entire Star Wars continuity, with concepts set in the far past and far future of the timeline and ideas for games about nearly every major Star Wars character.

Out of this huge pool of short, one- or two-sentence pitches, we selected a handful of our favorite concepts for further development. Each would ultimately contribute in some way to the final design for The Force Unleashed.

We began expanding each short pitch, developing more detailed storylines, fleshing out characters, and defining gameplay features and mechanics. While most concepts sounded exciting as short one-liners, some ideas were too limiting in their scope or appeal, while other concepts were so broad that they would take many years to build; some featured characters who would only be interesting for short bursts, while other characters felt clichéd or generic. Over time the concepts that survived this round of creative development excited and engaged everyone on the team, and had us all dreaming about new Star Wars stories and experiences.

Who "We" Are

Throughout this book, Brett Rector and I often use "us" and "we" to convey the experience of an entire company that rallied together to create The Force Unleashed.

In the early concept phase, the team had a scant five to ten people. Once we had a lock on the basic game type—third-person action game with over-the-top Force powers—we expanded the group quickly, up to twenty people. While Brett and I were offered the opportunity to provide some insight into the development process, we are only a small part of what became a remarkable team assembled to design and build The Force Unleashed—a team which ultimately included more than 120 talented engineers, artists, designers, and producers who all committed themselves to delivering gripping gameplay and a truly authentic *Star Wars* experience. Virtually everyone at LucasArts affected the game somewhere along the way. And the list also extends to several groups from Lucasfilm who made invaluable contributions to the game's evolution, including ILM R&D and Lucas Licensing.

—W. Haden Blackman

"UNDERWORLD" BAR SCENE
Greg Knight

"Who wouldn't want to blow up a room full of Hutts?"
—concept artist Amy Beth Christenson

Early Concepts: "Star Wars: Underworld"

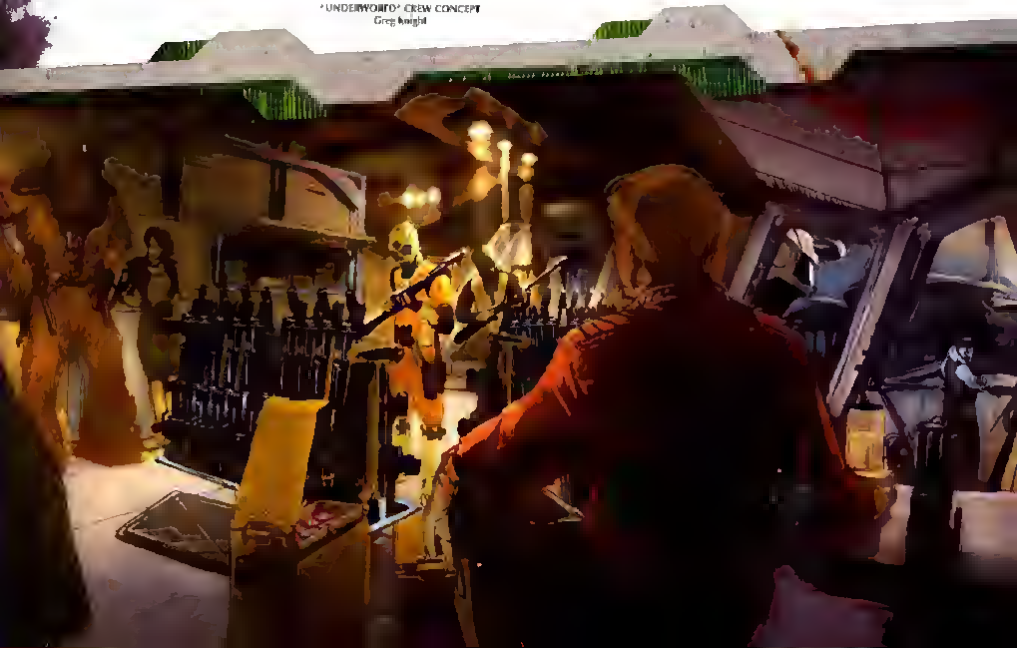
At various times over the past ten years, LucasArts developers have talked about making a game focused on the life of a smuggler, like Han Solo. The idea resurfaces in nearly every preproduction effort, and continues to hold great interest for *Star Wars* fans. So one of the first one-liners we threw into our brainstorming bucket was "A Smuggler Game." Over time, this concept became known internally as "*Star Wars* Underworld," a codename that suggested the game's primary setting. Although the team also explored a "Han Solo Game," in which the player would actually take on the role of the roguish pilot, we ultimately decided to put our energies into a design that enabled the player to create his own underworld character and plot his own course through the story and the galaxy.

Using Han Solo as inspiration, and drawing on many Expanded Universe sources, we generated a huge list of features for the Underworld concept. The player would need his own *Millennium Falcon*—a customizable starship that could be used for travel, smuggling, and space combat. He would also need a small crew—other characters the player could befriend or hire to pilot and maintain the starship, protect his back during cantina brawls, help avoid any "Imperial entanglements," and gather information. The idea of a "living" crew inspired many on the team, and a host of features were proposed to give each crew member his or her own personality traits, skills, and methods. Our ultimate goal was for the player to develop a bond with his crew members that was as strong as Han Solo's bond with his copilot, the Wookiee Chewbacca.

When generating any game concept, a central question is always: What is the player doing moment to moment? For the *Star Wars* Underworld concept, the player would be taking missions—ranging from smuggling runs to starship raids and even attacks against the Empire—from various shady contacts affiliated with criminal groups such as the Hutt Cartel, Black Sun, and the Rebel Alliance. As with some other open world games we intended to design the missions so that they could be completed in a variety of ways. The player would also be encouraged to explore the galaxy to meet new contacts and locate new sources of income.

Perhaps our biggest concern about the concept was the lack of a long-term goal. Why is the player ultimately playing the game? What does he hope to accomplish? Ideas ranged from "Become the next Jabba the Hutt" to more personal, story-related goals ("Find your missing partner!"). Another major concern was the complexity of the design. Building a galaxy-spanning game with customizable starships, an intelligent and evolving crew, and a flexible mission structure that offers players plenty of choices is no small feat. Despite these reservations, the concept was our front-runner to become LucasArts' next internally developed *Star Wars* game.

"UNDERWORLD" CREW CONCEPT
Greg Knight



Concept Art: Crucial to Creation

Production Diary #1

March 15, 2007

As much as the game development process is about putting ideas down on paper and brainstorming what we want the experience to be, it's the actual visualization of those ideas that sometimes helps sell the pitch.

For *The Force Unleashed*, the team sought to convey how they envisioned an amped-up version of the Force, and they pretty much took the same path George Lucas did when he made the *Star Wars* films to get their message across—using concept art.

The first piece that showed the Force "unleashed" was created by artist Greg Knight, who illustrated our version of Force push (page 40). The use of this particular Force power is decidedly different from what we saw in the movies. Another image by Greg shows a new Force power created for the game: Force repulse (page 2). This power works similarly to Force push, but can take out several enemies in a radius around the player. As the art illustrates, it is very over the top and very unleashed, which was exactly the intention.

—Brett Rector

"UNDERWORLD" BOUNTY HUNTERS
Greg Knight

Early Concepts: "Rise of the Rebellion"

Consumer research is an integral part of game development at LucasArts, beginning well before the early brainstorming phase. Based on this research, the development team knew that *Star Wars* fans were intrigued by the era between Episodes III and IV and the details surrounding the birth of the Rebellion. Focus testing also revealed that weapon customization—the ability to create, modify, and upgrade weapons in-game—was a highly desirable gameplay feature. We combined these two elements into a concept codenamed "Rise of the Rebellion," which cast the player in the role of the galaxy's first Rebel.

As with the *Star Wars:* Underworld concept, Rise of the Rebellion was meant to be an open world game that provided players with the ability to choose when, where, and how they attacked the Empire. Possible storylines focused on this first Rebel being an Imperial weaponsmith, an officer whose family was killed by a rival, or even a rogue clone trooper. As the team explored these possibilities, we purposefully stayed away from any Jedi or Force-wielding protagonists, preferring instead to focus on characters whose tactical skills, homemade weapons, and intelligence made them a match for the Empire.

The original mission ideas allowed for a wide range that included "shades of gray" objectives revolving around revenge or greed. But as the concept evolved alongside the morally ambiguous *Star Wars:* Underworld, we decided that we wanted something to contrast the darker concept. We mandated that the Rise of the Rebellion should be unabashedly heroic and vowed that the game would feature a central character and storyline that made the player feel like an underdog hero battling a huge and oppressive enemy from the outset. The evolved design focused almost solely on altruistic mission objectives, such as stopping the enslavement of the Wookiees, rescuing key political figures, and delivering supplies to those in need. Obviously, even with altruistic motives, the player would still be embroiled in combat, using a wide range of customizable weapons and armor, explosives, and vehicles to defeat stormtroopers and take out Imperial targets.

Like *Star Wars:* Underworld, we knew that the Rise of the Rebellion concept presented significant challenges. Chief among these concerns was the question: "If I'm not a die-hard *Star Wars* fan, why would I want to play this game?" As with all the concepts, the team wanted to appeal not only to dedicated *Star Wars* fans, but also to gamers of all types and more casual fans of the franchise. We were uncertain whether the hero we envisioned, the story of the first Rebel, and the proposed gameplay mechanics would captivate all of these groups. But the team's passion for a truly heroic central character kept this concept alive and moving forward.

ART FOR EARLY REBEL-R
GAME CONCEPT
Greg Knight

HULL BREACH
Greg Knight

REBEL AMBUSH
Greg Knight

JEDI HUNTER FOR "JEDI OUTLAW" CONCEPT
by Beth Christensen

Early Concepts: "Jedi Outlaw"

As part of our early explorations, we considered a number of established *Star Wars* time periods, including the Knights of the Old Republic era set thousands of years before the *Star Wars* movies. We were also interested in establishing new time periods: A wholly new era would be free of existing continuity constraints, providing us with greater freedom to craft an epic, galaxy-altering story.

As of late 2004, no one had yet told any *Star Wars* stories set hundreds or thousands of years in the future of the *Star Wars* timeline. We therefore targeted an era about five hundred years after the death of Darth Vader for a concept codenamed "Jedi Outlaw." According to our early design documents, by the time of Jedi Outlaw, both the Jedi and the Sith Orders have been rebuilt. However, rather than continue their eons-long war with one another, the two groups have struck an uneasy truce. Instead of a Jedi Council, there is just "The Council," a ruling body populated by six Jedi and six Sith. The protagonist in this concept was to be the last descendent of the legendary Luke Skywalker. As the story opens, the player character is essentially a Jedi sheriff, tasked with defending his region of space from criminals, alien invaders, natural disasters, and other threats. Eventually, the main character is framed for the death of another Jedi and becomes an outlaw himself. Hunted by both the Jedi and the Sith, the hero must discover who betrayed him and why—and all signs point to one of the Council's most respected Jedi Masters, whose last name just happens to be Solo.

The Jedi Outlaw concept was notable among the team's early concepts because of its strong emphasis on the Force. We theorized that, over the centuries, the Jedi and Sith learned to harness the Force in new and inventive ways. The player would have been able to hurl balls of Force energy, see in virtually any spectrum, and even shape-shift. While not quite "unleashed" yet, Jedi Outlaw certainly planted the seeds for the over-the-top Force powers that would help define the eventual game.

In addition to finding new applications for the Force, Jedi and Sith of this era would be better equipped than their film counterparts, going far beyond simple robes and lightsabers. According to the design, the player would be able to construct and customize sophisticated armor and exotic weapons, including a wide range of variant lightsabers. Perhaps most intriguing was the proposed ability to infuse weapons and armor with the player's own innate Force powers: Imagine a suit of high-tech armor or a double-bladed lightsaber crackling with Sith lightning.

One of the concept's greatest strengths—its wide-open time period—also presented one of its biggest challenges. The team knew that setting a story five hundred years into the future of *Star Wars* might not appeal to mainstream gamers and casual fans. Still, the rich world that the team had developed made it a dark horse contender to become the next *Star Wars* event.

OMIR ("JEDI OUTLAW
Amy Beth Christenson

REBEL WARRIOR CONCEPT
Greg Knight

Early Concepts: "Rebel Warrior"

Among the team members themselves, the most controversial and polarizing pitch started not with a one-line idea but with a single piece of concept art depicting an enraged Wookiee hurling the head of a dismantled AT-ST at Imperial stormtroopers. From this piece arose "Rebel Warrior," a game concept that would have put the player into the role of a Wookiee battling the evil Empire. The concept appealed to some of the team members because it would have allowed us to create a new kind of *Star Wars* superhero. The Wookiee of Rebel Warrior would have been super-strong, incredibly fast and agile, and able to use a wide range of weapons in his war against the Empire. We also wanted to explore the Wookiee species' legendary fury by introducing some type of "berserker rage" feature that would enable the hero to become even more powerful when activated.

Rebel Warrior shared many of Risa of the Rebellion's central mechanics: an open world and flexible mission system that would allow the Wookiee to take on the Empire in his own unique ways. Customizing the Wookiee hero—altering his appearance as the player sees fit—was also a key feature of this concept.

Concerned that a game built solely around a Wookiee wouldn't resonate with everyone, we continued to expand from the core idea, eventually adding a second playable character. As Rebel Warrior transformed, the Wookiee was joined by a female partner—a weaponsmith with a mean streak. Alone, neither character would have been able to strike at the Empire, but by working together they would become the most dangerous Rebels alive.

Although many at LucasArts had a great deal of passion for the project, we also knew that a game featuring such unconventional characters could struggle to receive a final greenlight and enter full production. Despite this, we continued to elaborate on the concept, hoping that a playable Wookiee character would provide a unique and captivating hook.

Other Early Concepts

The LucasArts *Star Wars* team explored literally hundreds of one-line ideas. And while only a handful became full-blown pitches, several others were taken far beyond the initial brainstorming stage before being abandoned. A few of these concepts included:

The Darth Maul Game: We considered virtually every major character for a starring role in the next *Star Wars* game, including Darth Vader, Luke Skywalker, Han Solo, Boba Fett, Yoda, and even Princess Leia. But Darth Maul—a perennial fan favorite and one of the most memorable prequel characters—received the most attention. The Darth Maul concept put the player in the role of the Sith assassin prior to the events of Episode I. The story and gameplay would have allowed the player to secretly hunt down and destroy the Emperor's enemies, including several Jedi. The core of the Maul game would have been fast-paced lightsaber combat punctuated by the use of Force powers and weapons. Ultimately, the Darth Maul concept was shelved in favor of other ideas that allowed for more freedom to create a sweeping story, with a new protagonist whose fate wasn't already known to fans.

Jedi Master: Part of the early concept development involved "testing the waters" with various ideas, putting a short pitch in front of potential consumers to gather feedback on very specific features or elements. Jedi Master was positioned as the continuation of the critically acclaimed Jedi Knight series, but with a new twist; The story was much darker, more violent, and more mature than previous iterations. The early concept overview described the game as *Star Wars*—style survival horror, emphasizing life-or-death battles with frightening aliens, horrific cyborgs, deranged cultists, and relentless bounty hunters all during the Jedi Purge immediately after Episode III. Although written only to gauge the interest in both another Jedi Knight title and *Star Wars* game with more mature themes, even from the outset the team felt that the concept was far too gratuitous and derivative, which consumer testing soon confirmed.

Jedi Prime: While exploring other eras, the team hit upon the one-liner, "Become the galaxy's first Jedi." This early idea prompted a host of questions and story opportunities: Who was the first Jedi? How did he discover the Force? How did he build the first lightsaber? As the team began answering these questions, we also identified the game's central villain: the first Sith, a character who—in the early storyline—is inspired by the first Jedi to also discover the Force, but quickly corrupts it for his own ends. Jedi Prime was an interesting concept, but the team knew that any idea set outside the films might not resonate with a mainstream audience. Thus, we decided to focus on just one "new era" game, and Jedi Prime was set aside in favor of the richer Jedi Outlaw concept set 500 years after *Return of the Jedi*.

SUMMONING JEDI AND SITH SPIRITS
Greg Knight

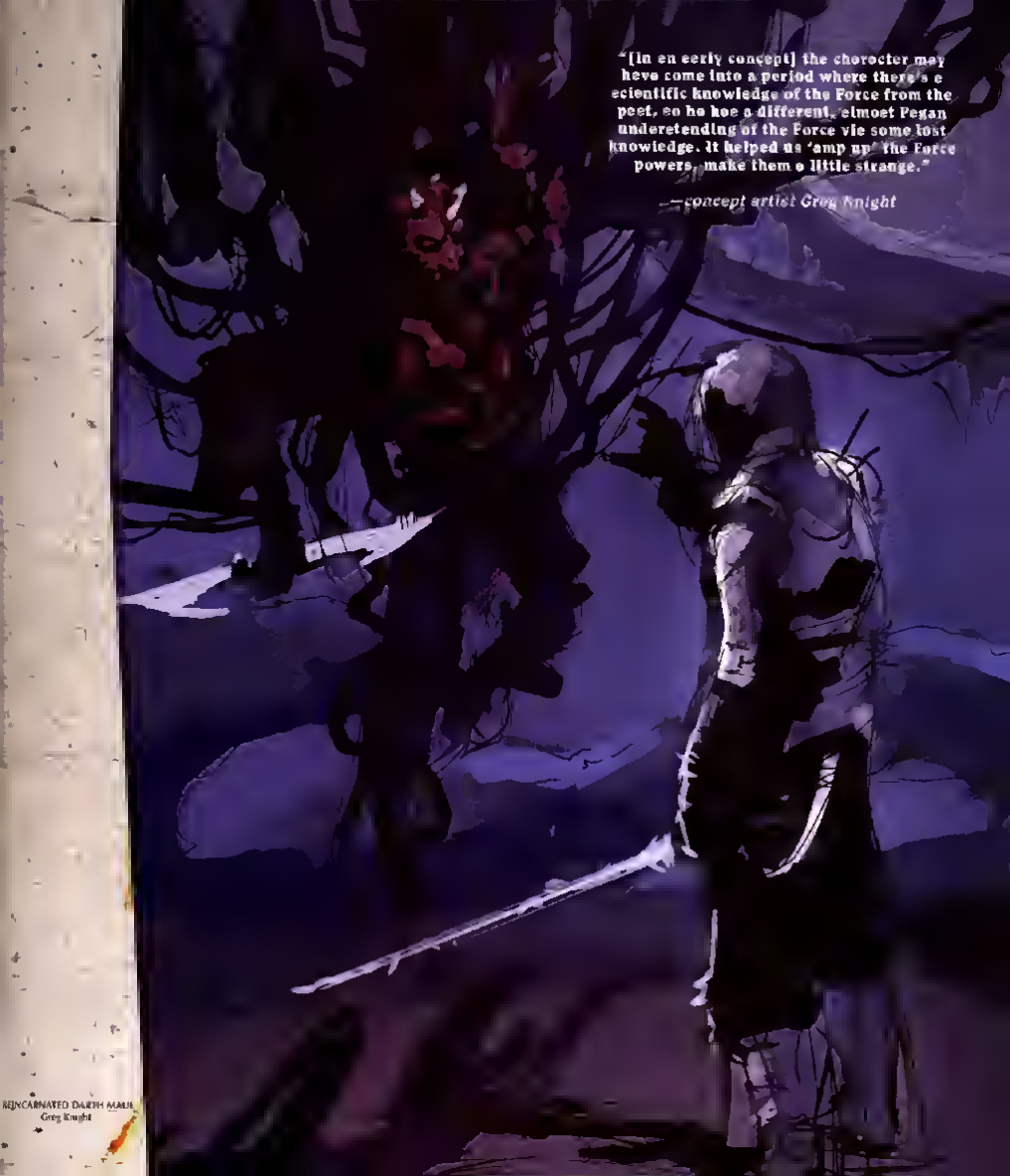
True Jedi Trials: Pitching to George Lucas

By April of 2005, the team had developed and focus tested several solid concepts (including *Star Wars*: Underworld, Rise of the Rebellion, Rebel Warrior, and Jedi Outlaw). Each concept had its obvious strengths and weaknesses, with Underworld and Rise of the Rebellion the clear front-runners. The next step in this early concept development phase involved pitching these ideas to George Lucas for feedback. Though Lucas has always believed that the next *Star Wars* stories could and should be told through interactive games, he had never been actively involved in helping develop a game's story. Because we at Lucasfilm and LucasArts wanted this game to become the next major installment in the core *Star Wars* mythos, his involvement was paramount.

We prepared for several weeks before our initial conversation with Lucas, creating several colorful pitch boards that displayed concept art and text calling out key features. The pitch boards were meant to be springboards for additional conversation, allowing us to quickly convey the core idea of each concept and then elaborate on specific areas at Lucas's request.

As expected, Lucas provided a wealth of ideas and feedback for each concept. The early stages of the meeting revolved around *Star Wars* in general. Lucas emphasized the need to include both drama and comedy in any *Star Wars* story, and stressed the core themes of the films (including redemption, which would later become an important term for us). He encouraged us to focus on mainstream accessibility—in both the story and the game mechanics—and offered insight into other *Star Wars* projects in development, including the new animated Clone Wars series.

The specific concepts were received with mixed enthusiasm by Lucas. The features presented in *Star Wars*: Underworld—starship customization, an evolving crew, an open-ended mission structure—appealed to Lucas, but he recognized the lack of a strong story. Nevertheless, he was comfortable with us moving forward with the idea, confident that a compelling plot could be developed using the *Star Wars* underworld as a backdrop. Lucas was similarly intrigued by Rise of the Rebellion and approved setting the eventual game between the two movie trilogies. He also approved our desire to reveal when, how, and where the Rebel Alliance was born.



"[In an early concept] the character may have come into a period where there's a scientific knowledge of the Force from the past, so he has a different, almost Pagan understanding of the Force via some lost knowledge. It helped us 'amp up' the Force powers, make them a little strange."

—concept artist Greg Knight

REINCARNATED DARTH MAUL
Greg Knight

"JEDI OUTLAW" CONCEPT
Greg Knight

Rebel Warrior and Jedi Outlaw fared far worse. After spending several minutes discussing the importance of drama and meaningful dialogue between two characters, Lucas was critical of the Rebel Warrior concept because it featured a main character, a Wookiee, who couldn't actually speak. In addition, the team's vision of what a Wookiee could be—specifically, our desire to imbue their hero with immense strength, incredible speed and agility, and other superhuman attributes—did not match Lucas's own vision of the species. While he liked the idea of a powerful, almost monstrous hero, he encouraged us to create a new alien species to fulfill this role.

Lucas felt that Jedi Outlaw was set too far outside the existing films much as we had feared. However, even within this flawed concept, Lucas identified a handful of elements that could be carried into any game design. He approved the team's descriptions of the new Force powers—which ultimately became the seeds for The Force Unleashed.

As we left this first meeting with George Lucas, we were slightly conflicted. On one hand, we were inspired by Lucas's wealth of ideas and creative energy. Our confidence had been boosted by the fact that he shared our same reservations about some of the concepts. On the other hand, we felt validated by his support of our favorite ideas and features, though there was no clear support of any single concept. Even Underworld and Rise of the Rebellion—concepts that had resonated with both the team and Lucas—were still missing some ingredients that would make them truly special.

Despite the lack of a clear winner among the pitches, the meeting with George Lucas provided us with a new set of parameters for our next round of explorations. We now knew that the game would be set in the era between Episodes III and IV. We also wanted to include some of the elements that resonated with Lucas, including the birth of the Rebellion and a new vision for Force powers.

One-sheets: Basics for Selling the Game

Production Diary #2

March 22, 2007

There's a stage even before preproduction, called the concept stage. In *Star Wars* filmmaking terms, it is somewhat analogous to the time George Lucas spent developing story drafts, bouncing ideas off the skeleton crew art department before that group of artists increased in number. In the gaming world, it involves generating a lot of ideas for what might make a cool game, and getting those ideas onto paper—specifically, what we call one-sheets.

One-sheets are summaries of the game that fit onto a single sheet of paper and usually consist of a single piece of concept art and two paragraphs that sum up the game in a tidy "elevator pitch": the first paragraph focuses on the story and character, while the second relates to game features. This is followed by a series of bullet-points that help sell the game's features; the one-sheet ends with an estimated rating, price point, and possible platforms. Imagine this being a retailer's sales-sheet for a game that doesn't yet exist.

We presented about 20 one-sheets to George Lucas, took his feedback on our initial ideas and crafted a few more one-sheets for testing. Far and away, the story of the Secret Apprentice had the best response. With these directives, we had a previs video created to visually explain our concept of over-the-top Force powers and make a more well-rounded pitch to Lucas.

—W. Haden Blackman

"Let me meditate on that
I'm sure I'll find the right
target.... We're going to need
all the help we can get."
—The Apprentice

ABOVE:
TROPHY ROOM
("STAR WARS: UNDERWORLD")
Amy Beth Christenson

BELOW:
"CAVE OF EVIL" MOMENT
("THE FORCE UNLEASHED" EARLY CONCEPT)
Amy Beth Christenson

ROGUE'S GALLERY ("REBEL JEDI")
Greg Knight

Round Two: Rebel Jedi

After the meeting with Lucas, the development team regrouped and began strategizing our next steps. We quickly shelved Rebel Warrior, Jedi Outlaw, and even *Star Wars*: Underworld, and focused solely on improving the Rise of the Rebellion concept. At the same time, we returned to the wealth of consumer research, where we came to terms with our rather obvious missing ingredient. Although initially reluctant to focus on a Jedi or Force-wielding hero, the research was undeniable: Gamers and *Star Wars* fans alike identified being a Jedi as the most appealing *Star Wars* fantasy. We began building a new concept.

For this revised pitch, codenamed "Rebel Jedi," we wanted to combine customizable gadgets and weapons with a handful of Force powers. The hero was described as "a former soldier who has mastered a wide array of weapons, and has learned to use them in combination with his innate and burgeoning Force abilities."

The protagonist in Rebel Jedi was inspired by heroes from classic spy movies, comic books, and even Westerns. He had access to gadgets galore, a tricked-out secret lair, several exotic vehicles, a handful of loyal contacts, and a colorful rogue's gallery of villains. The story revolved around two classic themes: revenge and redemption. The hero initially begins as an Imperial agent, hiding his connection to the Force while seeking out and defeating the Emperor's enemies. However, he is eventually betrayed by his handler, who reveals the hero's Jedi heritage to the Empire. The resourceful hero then goes underground, using his skills and powers to strike back. The Empire, in turn, sends an army of bounty hunters and other villains after the hero, intent on destroying him. While initially motivated by revenge, the protagonist's fight against the Empire inspires other freedom fighters, including Bail Organa and Princess Leia. After a series of successful strikes, the Alliance is officially born.

As part of developing the Rebel Jedi concept, the team began our first true pre-visualization work, creating short animated sequences to convey the appeal of combining Force powers with weapon use. These animations included a sequence in which the armored hero ignites a stormtrooper with a flamethrower, then uses the Force to hurl that fiery Imperial into another group of enemies, setting them all ablaze. In another "pre-vis" animation, the protagonist freezes an enemy with a carbonite gun, then shatters the frigid statue with a well-placed Force push. We also designed a rich weapon customization system for creating a host of exotic arms and a viral reputation system, which would allow word of the hero's deeds to spread across the galaxy.

Rebel Jedi was certainly closer to the type of hero, core gameplay mechanics, and storyline the team would ultimately develop into The Force Unleashed. Yet, when presented to LucasArts' executive team, the concept was rejected. In trying to combine so many disparate elements, we had strayed too far from what many felt was the heart of *Star Wars*: the Jedi.

REBEL JEDI CONCEPT
Greg Knight

HIDEOUT ("REBEL JEDI")
Greg Knight

Finding "The Force Unleashed"

By late spring of 2005, those of us on the *Star Wars* team were starting to get nervous. While we did not have a concrete release date yet and the development group had not grown substantially since August 2004, we had invested significant time, money, and energy into creating new technology and development tools for a game that had not yet received any official greenlight. We needed a clear concept to help define our technology needs, develop staffing plans and schedules, and increase morale. While hundreds of concepts had been explored, we knew that we still had not found the perfect combination of gameplay features, storyline, and central protagonist. Finding the right formula proved to be far more art than science, and our confidence was shaken by the failure of the Rebel Jedi concept.

To jumpstart the next phase of concept development, the team took a two-pronged approach. First, we stripped the Rebel Jedi concept to its core, focusing on the "Jedi" over the "Rebel." We removed all references to gadgets and hi-tech weapons, which forced us to rely on the Jedi's tried-and-true arsenal: Force powers and a lightsaber. With this in mind, the art and design teams began work on a new round of concept art centered solely on the Force. The direction given to the team was simple: Do something with the Force that's never been seen in a game before.

EARLY BARUS PRIME CONCEPT
Chin Ko

DARTH MAUL
Amy Beth Christenson

ART FOR "SITH JEDI" ONE-SHEET
Amy Beth Christenson

At the same time, we revisited the story and identity of the main character. We knew that the idea of starting the game as a villain and then transforming over time into a hero was appealing to consumers and fans. This was also an arc the team wanted to explore for its great dramatic potential. By removing the character's use of weapons and gadgetry, it became clear that the character would need to be an overt Force-wielder, whose connection to the Force was probably well-known to the Emperor. But where would such a character fit within the Imperial ranks and *Star Wars* continuity? Initially, the answer seemed simple: If the Emperor knew about this Force wielder and hadn't yet destroyed him, as he had all the other Jedi, then the main character must be one of the Emperor's servants. He could not be a soldier or Imperial officer, but one of Palpatine's clandestine operatives, and perhaps even a rival to Darth Vader.

This backstory certainly wasn't unique. Continuity had already established that the Emperor uses Force-sensitive agents—known as the Emperor's Hands—including fan-favorite Mara Jade, who eventually reforms and marries Luke Skywalker. But we desperately wanted our protagonist to be one-of-a-kind, so we raised the stakes. What if, instead of just serving the Emperor, this character was actually the Emperor's secret apprentice—someone he was training to eventually replace Darth Vader? This notion was driven in part from conversations with George Lucas. He explained that after Anakin's devastating defeat in Episode III, the Emperor views Darth Vader as broken, his once formidable connection to the Force weakened by the fact that his body is largely cybernetic and inorganic. Thus, it made sense to us that the Emperor would find and train a replacement.

As the identity of the main character was taking shape, the first round of "Force explorations" was delivered. They ranged from metaphysical extensions of familiar Force concepts—an army of Jedi and Sith spirits summoned by the player to fight alongside the player character—to new powers inspired by comic books and science-fiction: shape-shifting, teleportation, even wall-crawling. While all of these ideas certainly had gameplay implications, they didn't feel particularly suitable to *Star Wars*. During discussions about these diverse powers and ideas, however, we kept returning to the importance of re-imagining the Jedi and Sith's core powers, push, grip, and lightning specifically. We decided to focus almost exclusively on Force push, which was viewed as the Jedi's staple power. If the team could re-envision this power, seen so many times in the films and other sources, then we were confident we could reinvent the other powers as well.

The concept artists produced another round of imagery, eventually creating pieces that would become the building blocks for The Force Unleashed. Among these was an image of a stormtrooper being hurled backwards as if hit by an invisible cannonball, slamming through stone columns as he flew through the air. With this

SITH LIGHTNING UNLEASHED CONCEPT
Chris Voy

image in hand, the team began discussing what it must feel like to be a classically trained Jedi, almost overflowing with Force energy but taught to always control this power, to never give in to emotion, cut loose, or let go. What if the game's central character—whose training was not that of a traditional Jedi—allowed him to unleash the Force in violent, unpredictable ways? The result would be the Force as we know it, amped up and even out of control in some cases. As used by the Emperor's Apprentice, the Force could be violent, visceral, and elemental.

The vision of the Force was taking shape, but we still had nagging doubts about the main character's role as the *Emperor's* apprentice. The Emperor was seen as manipulative, greedy, and cruel, but did not necessarily engender fear in the team, nor did we aspire to play a character like him. Instead, we knew of a far more menacing character whom we all knew players would want to serve, impress, and even become: Darth Vader. Once we wrote down the phrase "Darth Vader's Secret Apprentice," we were stunned by the immediate surge of creative energy it inspired. Suddenly, we had a clear and simple origin for the main character, something around which we could build a story: Darth Vader seeks to overthrow the Emperor and trains an apprentice to help him with this daunting task.

With these two key phrases—"Darth Vader's Secret Apprentice" and "The Force Unleashed"—we finally had the foundation for the next Star Wars game.

"Your destiny is now your own. Sever all ties to your past. No one must know that you still serve me. Now go. And remember that the dark side is always with you."
—Darth Vader

SCENE 47

From Pitch to Approval
Chapter Two

PREVIOUS PAGE:
APPRENTICE CRASHES A STAR DESTROYER
Amy Beth Christenson

FEMALE JEDI
Greg Knight

"Hadun had the idea early on that your Force powers are so unleashed that you could pull a Star Destroyer out of the sky. I was pretty inspired .. as soon as I heard that, I went back to my desk and did a whole bunch of storyboards." (previous page)

—concept artist Amy Beth Christenson

Nailing Down the Story

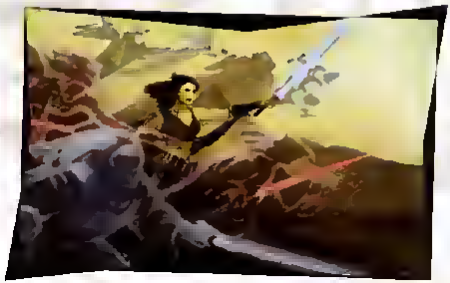
By fall 2005, the team had our protagonist—Darth Vader's Secret Apprentice—and a vision for the Force—"the Force unleashed." One of the next steps was clearly conveying the concept of "the Force unleashed" to all of LucasArts, Lucasfilm, and to George Lucas in particular.

Visualizing the Force Unleashed

To capture the essence of "the Force unleashed," the team continued to produce concept art. Every known power was reexamined and pushed in these studies until it felt truly "unleashed." This process culminated with an image showing a Star Destroyer crashing at the feet of the Apprentice, suggesting that the anti-hero had ripped the vessel from the sky using only the Force. The crashing Star Destroyer became one of the key images for early preproduction, serving as both inspiration and as a guide for how big we wanted to go with the game's epic Force-power moments.

During this phase, our designers and artists also explored a number of new powers that they felt were direct extensions of the Force as portrayed in the films and other sources. The most popular of these was Force repulse, described as an expansion of Force push, which creates a violent radial shockwave of kinetic Force energy.

As dozens of concept pieces were being generated, we were also working on a series of pre-visualization animations that captured the spirit of The Force Unleashed. Like the concept artists, the animation team began by focusing on the staple power of the Jedi, Force push. Final animations depicted a generic Jedi using the Force to push, slam, repel, and hurl stormtroopers, culminating with a stormtrooper being thrown into an oncoming TIE fighter, destroying both. By all accounts, this pre-vis was one of the most important factors in securing the game's ultimate greenlight.



SUMMONING A SPIRIT ARMY
Greg Knight

The Early Storyline

Even after the team identified the game's central protagonist, the story for *The Force Unleashed* went through numerous revisions. But as plot details shifted and evolved, a few key details never wavered: commitment to the time period, the inclusion of the birth of the Rebel Alliance in some way, and the hero's role as Darth Vader's Secret Apprentice.

From a gameplay perspective, we knew that combat would be an important part of the experience and that players would expect ample action. Therefore, the story had to reasonably supply a host of enemies for the Apprentice to fight and defeat using his amazing suite of Force powers. We were also faced with a challenge common to all *Star Wars* games: The Apprentice's arsenal includes a lightsaber, which is often shown in the films as a "one-shot kill" weapon capable of taking down most enemies—but we did not want to create a game that simply provided wave after wave of fodder units for the player to cut down. Instead we opted for more powerful enemies: Jedi and Sith–like warriors; Force-wielding aliens; opponents using lightsaber-resistant weapons (such as the staves used by General Grievous's bodyguards in Episode III); droids with Force-deflecting shields (similar to those deployed by Episode I droideka); Dark Troopers and other incredibly powerful Imperial units; vehicles like the AT-ST; and even giant monsters.

To ensure the creation of a story that could include everything from Jedi to stormtroopers as enemies, we decided that Darth Vader would be intent on keeping the Apprentice's identity a secret and would instruct him to kill any witnesses to his actions—including Imperials. We also focused on a character arc built on the theme of redemption, a theme specifically suggested by George Lucas in our meetings to provide an anchor to the story. With redemption at the crux of the story, the Apprentice's arc would need to take him from fighting Jedi on Vader's behalf to combating anything the Empire could throw his way, including the Emperor.

Even with a wide array of enemies to challenge the player and fill out the story, we wrestled with an even more important question: "Who is the ultimate villain?" (Or, in game terms, "Whom do you fight at the end of the game?") As with many mythic stories, we wanted a single villain

FORCE PUSH UNLEASHED
Greg Knight

"When you use your Force powers you do get a little grittier, a little meaner than they do in the movies. This image [above] is meant to ask 'how far can we go?'"

—concept artist Greg Knight

FIGHTING THE NEW JEDI COUNCIL ("JEDI OUTCAST")
Greg Knight

LEIA CHARACTER DEVELOPMENT STUDY
Greg Knight

pulling the strings of the secondary enemies—a character the player would become obsessed with defeating. And, at the game's climax, we needed to be able to deliver a satisfying payoff in the form of a major battle with—and defeat of—that villain. We felt strongly that the final villain should be a Force wielder who was more powerful (and much more evil) than the Apprentice. We were wary of using Darth Vader or the Emperor in this role, since we knew that the player would not be able to kill either of those characters. If the final villain couldn't die, we were afraid that would make the game's final fight anticlimactic. We continued to struggle with the identity of the game's nemesis, but forged ahead with the story in the hopes that the arch enemy would materialize from plot details or character backgrounds.

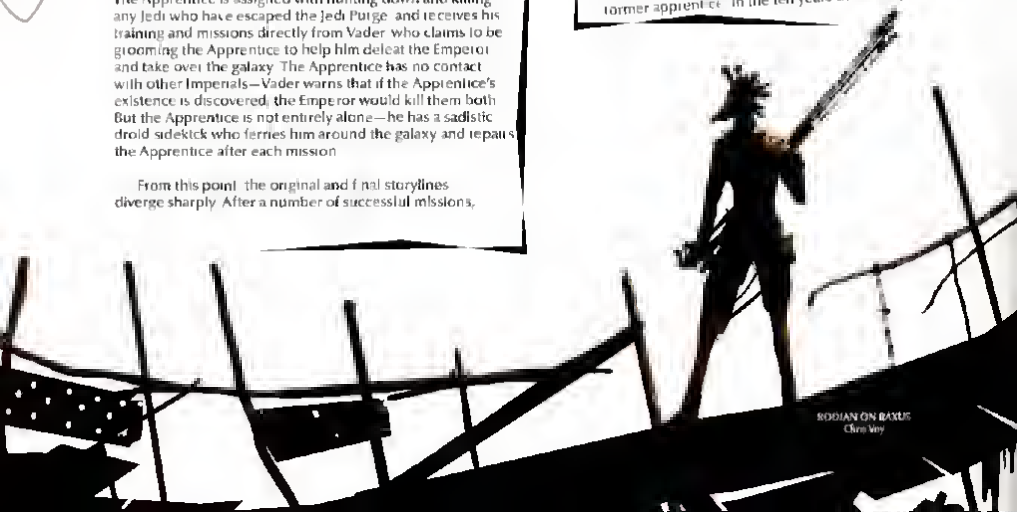
As redemption became the central theme to the story, we needed a compelling turning point for Darth Vader's Apprentice to begin his transformation from Sith hopeful to Rebel agent. If the hero's journey of Luke Skywalker begins with the discovery of Princess Leia's message to Obi-Wan and the death of his guardians, what event or events would drive the Apprentice from the Empire and into his own heroic quest? Taking inspiration from our previous explorations into the Rebel Jedi concept, we focused on some form of betrayal as the catalyst.

The first draft of the story took many months of development before it was ready to be presented to George Lucas. In the initial story, much of the setup remains the same as in the final game. The tale opens several years after Episode III, with the Empire nearing the height of its power. The Apprentice is assigned with hunting down and killing any Jedi who have escaped the Jedi Purge, and receives his training and missions directly from Vader, who claims to be grooming the Apprentice to help him defeat the Emperor and take over the galaxy. The Apprentice has no contact with other Imperials—Vader warns that if the Apprentice's existence is discovered, the Emperor would kill them both. But the Apprentice is not entirely alone—he has a sadistic droid sidekick who ferries him around the galaxy and repairs the Apprentice after each mission.

From this point, the original and final storylines diverge sharply. After a number of successful missions, the Apprentice is sent to the planet Alderaan to kill a Jedi, revealed as Master Shaak Ti, who is serving as the bodyguard for the Royal Family and specifically charged with watching over a very young Princess Leia. The Apprentice confronts and kills Shaak Ti, an act witnessed by Leia. The Apprentice can't bring himself to kill the girl, despite the fact that she has seen his face. He flees Alderaan, but is soon brutally ambushed and seemingly killed by Darth Vader—and a shadowy "dark Jedi" working alongside the Dark Lord.

In a metaphysical "netherworld of the Force," the Apprentice encounters the spirit of Jedi Master Qui-Gon Jinn, who guides the Apprentice from the brink of death and becomes his mentor and advisor. When the Apprentice regains consciousness, he finds himself safely aboard his starship and learns that he was rescued from Imperials by his loyal droid sidekick. Unfortunately, the droid was forced to keep the Apprentice in stasis until he could find the right parts for the necessary repairs. The Apprentice is horrified to learn that roughly ten years have passed since his apparent death.

Fueled by a desire for revenge, but also guided by the spirit of Qui-Gon, the former Apprentice begins a mission to topple the Empire. During this quest, the protagonist learns that Vader was secretly training two apprentices simultaneously: the main character and the mysterious dark Jedi who helped in the ambush. Vader had sent them on similar missions to gauge who was more ruthless and competent. Although Vader had no knowledge of Princess Leia's true heritage, he viewed the protagonist's inability to strike her down as a failure, which prompted his attack on his former apprentice. In the ten years that have passed...



RODIAN ON BAXUS
Chris Voy

"I can't leave while this planet is still enslaved. Once that Skybook is in place, the Empire will start shuttling Wookiee slaves into space. Entire villages will be taken off-world in a matter of days. If you'll give the Wookiees a chance to disappear, I'll leave. -Princess Leia
SCENE 61

the dark Jedi who stood at the Dark Lord's side during the ambush has become Darth Vader's true apprentice, and the two are now preparing to overthrow the Emperor together.

The hero's quest also leads him to the fledgling Rebel Alliance. When the former Apprentice first meets Bail Organa, Mon Mothma, and the other founders of the Alliance, the group is just a political ideal rather than an army. The Apprentice agrees to help the Alliance in exchange for information and because it provides him with an opportunity to strike back at Vader and the Empire. However, he also starts to form bonds with Bail and his daughter—who doesn't recognize the rebuilt Apprentice as Shaak Ti's murderer.

The story reaches its climax when the hero intercepts a transmission from the Dark Lord to his new apprentice. Vader has uncovered proof that Bail and Princess Leia are leading the Rebellion, and he sends his apprentice to kill the Organas. The hero agrees to protect Leia, knowing that this will both pit him against Vader's new lackey and perhaps atone for the death of Shaak Ti.

The final clash between the hero and Vader's new apprentice takes place amid the battle referenced in the text crawl for *A New Hope*. Leia receives the Death Star plans, and the protagonist must help her escape by defeating Vader's new apprentice. After this climactic battle, Vader arrives. Rather than immediately attack, Vader claims that he only betrayed the hero because he wanted him to become even more powerful by embracing hatred, seeking revenge and becoming "truly Sith." Vader offers the hero the chance to become his apprentice once again. The hero is faced with a choice: stand with Leia and confront Vader, allowing the Rebels to escape; or join forces with Vader to destroy the Alliance. What the player chooses at this pivotal moment determines the outcome of the game and the fate of the galaxy.

BATTLE WITH BAZIAN
Amy Beth Christenson

"I have recruited Bahara to my cause. But now I need your counsel. My allies seek a major strike against the Empire."
The Apprentice

"The Emperor rules the galaxy through fear. You must destroy a symbol of that fear. The Empire is building Star Destroyers above Raxus Prime. That shipyard is your next target... There is much conflict in you. Your feelings for your new allies are growing stronger. Do not forget that you still serve me."
Darth Vader

BOUT WITH VADER
Amy Beth Christenson

Pitching The Force Unleashed

As with the previous rounds of concepts, both the game's story and the concept of The Force Unleashed received intense scrutiny at LucasArts and, ultimately, from George Lucas. In late fall 2005, we prepared to pitch the story and its re-envisioning of the Force to Lucas, but we still had several major concerns. Would Lucas approve the over-the-top action of the Force? Would he accept the concept of a Secret Apprentice serving Vader? Would he allow this Apprentice to kill Shaak Ti? Could Qui-Gon Jinn, Princess Leia, Bail Organa, and others be featured in prominent roles? Did the story have enough opportunities for drama and comedy, the importance of which Lucas stressed in earlier discussions?

As with the initial meetings with Lucas, this pitch meeting was alight with creative energy. Ideas flowed from Lucas as he helped identify the best elements of the story, while encouraging us to explore avenues we had not considered or that remained underdeveloped.

Showing George Lucas the previs videos was nerve-wracking. We were presenting a new take on the Force to the man who had created the concept. Fortunately, we were relieved when, only moments after the previs reel ended, Lucas leaned back in his chair and said "Go make that game." He described The Force Unleashed as a "perfect" tool for creating compelling game mechanics.

Our next big hurdle was the notion that Darth Vader would seek an apprentice. We showed Lucas concept art and described the character and his role. Lucas didn't waste any time approving this idea as well, and even went on to describe at length how Vader would motivate the Apprentice through fear, threatening and punishing him at every turn, while still holding out the promise of one day taking on the Emperor together. And although Shaak Ti's death had already been depicted in deleted scenes from Episode III, Lucas approved her canonical death occurring in the game instead.

However, Lucas felt we were not exploiting either Vader or the Emperor to their fullest. He compared and contrasted the two villains, suggesting that the Emperor's power over others comes from greed rather than fear. He felt that either character could be the game's ultimate nemesis, rather than the faceless, nameless second apprentice or another rival. He

JUNO ECLIPSE IMPRISONED
Chin Ko

dismissed the notion that a player would need to kill Vader or the Emperor to feel satisfied with the battle: just knowing that the hero had defeated either character—and saved the Alliance in the process—could be reward enough, if the battles also provided intense action and the player cared about the characters in the Alliance. Finally, he suggested that Palpatine should learn of the Apprentice's existence, then order Vader to betray the main character at some point in the game.

He was also uncomfortable with our use of Leia in a starring role, and explained that Vader doesn't learn of Leia's affiliation with the Rebel Alliance until Episode IV. He also wanted us to be vague about the exact timing of the game, and did not approve the game ending with the battle referenced in Episode IV's text crawl.

Perhaps most significantly, Lucas strongly encouraged us to create new characters to fulfill pivotal, archetypal roles in the game's story. While he did not reject the concept of Quigon guiding the apprentice, he stressed the need for a flesh-and-blood Jedi mentor as well. Rather than rely on Princess Leia as the female lead, he asked the team to create a true love interest who could help provide drama. And he wanted more details about the Apprentice's sidekick, whom he felt should provide some sort of comic relief.

Again, we were conflicted as we left Skywalker Ranch and our most recent conversation with Lucas. The removal of Princess Leia as a prominent figure caused much of the story's key plot points to collapse, and we had been instructed to create several new characters, find some way to integrate the Emperor, and increase the importance of Darth Vader's role in the story. To add to the pressure, Project Lead Blackman felt that the previous storyline also lacked a strong "twist" that would catch *Star Wars* fans by surprise and rewrite what they thought they knew about the original trilogy.

"We wanted an image that felt like classic *Star Wars* and I kept thinking back to the fight between Vader and Luke. The Emperor needed to be there in witness to the fight, but instead of having him there in person, I went with a giant hologram on a backdrop [left]."

—Concept artist Amy Beth Christenson

BATTLE ON THE DEATH STAR
Greg Knight

The Story Scramble

After the late fall meetings with George Lucas, the LucasArts *Star Wars* team went into a mad dash to revise the game's story. The team had the game's core gameplay hook—the Force unleashed—but we were still without an approved plotline or a developed cast of characters. We were starting to have serious discussions about a Fall 2007 or Spring 2008 release date, which put looming deadlines in front of the team, but without the story we were struggling to keep our creative momentum. Fortunately, the move from Skywalker Ranch in San Rafael to the Letterman Digital Arts Center in San Francisco's Presidio provided us with a welcome change of scenery, and closer interaction with both Industrial Light & Magic and Lucasfilm. The move buoyed the team, inspiring us to strive for an even more compelling story. At the same time, a small infusion of new team members brought fresh perspective and a wealth of ideas.

With the team growing, we returned to frantic brainstorming, which can only be described as all over the map. Knowing that much of the Apprentice's early goals would be influenced by his relationship to his master, we revisited Vader's ultimate objectives. Did he really want to topple the Emperor or was he after something else entirely? We explored some very radical notions. One short-lived idea involved Vader seeking ultimate power in order to resurrect Padmé, while another had Vader becoming a pawn of an undead Darth Plagueis. Intrigued by Darth Plagueis as a character, we briefly toyed with somehow revealing that the Apprentice is actually a reborn Plagueis, or using Plagueis to fill the mentor role Lucas wanted us to include in the game.

Fearing that the creative process had fallen down a rathole—with the story lost in bizarre details, fringe *Star Wars* elements and still lacking a major twist—Blackman returned to the existing plot and Vader's motives. After reviewing his notes from the conversations with Lucas, he concluded that Vader might not have his own agenda at this point in the timeline. What if he were still loyal to the Emperor, and that all his talk of overthrowing Palpatine was merely a motivational tool for the Apprentice (and the player)? If this were the case, then the Apprentice's missions would secretly be part of some grander plot orchestrated by the Emperor. This direction felt true to the characters and the saga—after all, as revealed in Episode III, Palpatine is the Machiavellian mastermind behind the creation of the Clone Army; the galaxy-shattering war between the Republic and the Confederacy of Independent Systems, and the fall of the Jedi. But what would the Emperor (and by proxy, Vader) actually want at this point in the timeline?

To answer that question, the team again turned to George Lucas's feedback, specifically his comments on the time period. According to Lucas, while the Emperor is firmly in power after Episode III, he has many political enemies who are plotting against him. The Senate still exists, at least a handful of Jedi continue to elude Vader, and many sections of the galaxy are not yet under imperial control. We knew from these notes and the greater continuity that

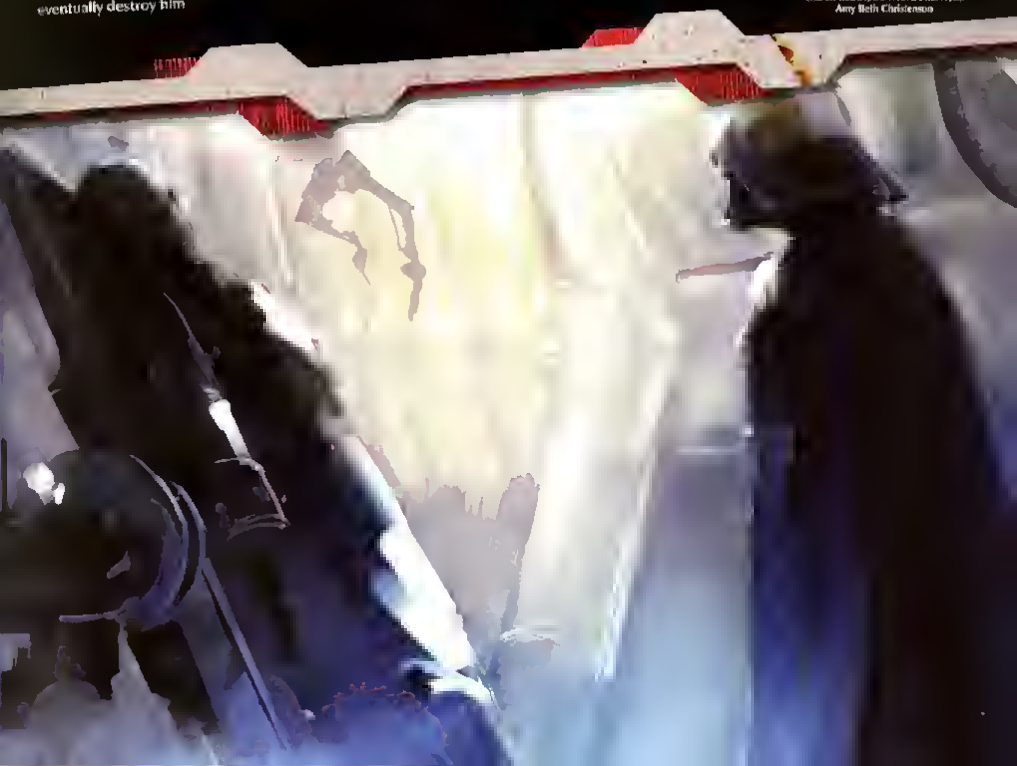
tha Emperor would stop at nothing to identify and destroy his enemies, making an example of them in order to inspire fear and encourage loyalty. Obviously, the Apprentice could be a major tool in achieving the Emperor's goals, even if the Apprentice himself believes that he is being trained to help Vader overthrow Palpatine.

Putting the Emperor into the role of mastermind greatly streamlined the story almost overnight. Tha Emperor and Vader would serve as the game's ultimate villains, removing the need for the underdeveloped second apprentice originally meant to serve as the main character's rival. Most importantly, Vader's betrayal of the Apprentice—tha act that puts him on his path toward forming the Rebellion—was made part of the Emperor's intricate plan to find and gather together his enemies. This became the twist Blackman wanted. The Force Unleashed reveals that the Emperor himself orchestrates the formation of the Rebel Alliance, never believing that it will become powerful enough to eventually destroy him.

"Vader saved you from death at the last second, and you wake up on the table and don't know what's going on yet. The characters are shadowed because we didn't know what [the Apprentice] looked like yet. I also wanted to make it more dramatic. I really like that face-to-face element. Vader is on the opposite side now. He's where the Emperor was at the end of Episode III, so it's kind of a role reversal."

—concept artist Amy Beth Christenson

VADER REBUILDS THE APPRENTICE
Amy Beth Christenson



CONFRONTING THE SPIRIT OF MACE WIN
Amy Beth Christenson

EARLY CONCEPT FOR JUNO, PROXY, AND THE ROGUE SHADOW CO
Greg Knight

REBEL HIDEOUT CONCEPT
Amy Beth Christenson

The Fax

As the team continued to hammer out the plot details, we were also developing the love interest, Jedi mentor, and comic sidekick. On February 10, 2006—after the big story beats and characters Juno Eclipse, Master Rahm Kota and PROXY were defined (see Chapter 3)—we were ready for George Lucas's feedback. Due to Lucas's demanding schedule, the revised story would need to be submitted via a lengthy internal memo. Blackman drafted a story outline and character descriptions, followed by a series of questions that cut straight to what the team felt would be Lucas's major concerns, including:

- Can Princess Leia appear in the game as a Rebel contact?
- Can Darth Vader learn that Bail Organa is associated with the Alliance?
- Can the finale occur during the first major conflict between the Alliance and the Empire?
- Can the Emperor and Vader plot to form the Rebel Alliance?

"Early on, in older story versions [left and above], the player hunts down fallen Jedi spirits. You find Mace Windu, whose spirit has been wandering the Coruscant underground."

—concept artist Amy Beth Christenson

Within days of submitting the memo, LucasArts would receive Lucas's feedback via fax. After being notified it was about to be sent, the executive staff and the team leads gathered around the machine, waiting for the fax—which would reveal whether or not Lucas had approved the story, his thoughts about the characters, and his responses to their weighty questions. The transmission began, but as the first page began coming through, the machine jammed... For a moment, it seemed as if Lucas's approval—or rejection—of the story would be lost. After a short struggle with the machine, however, the crumpled pages were extricated and the team members knew their fate. .

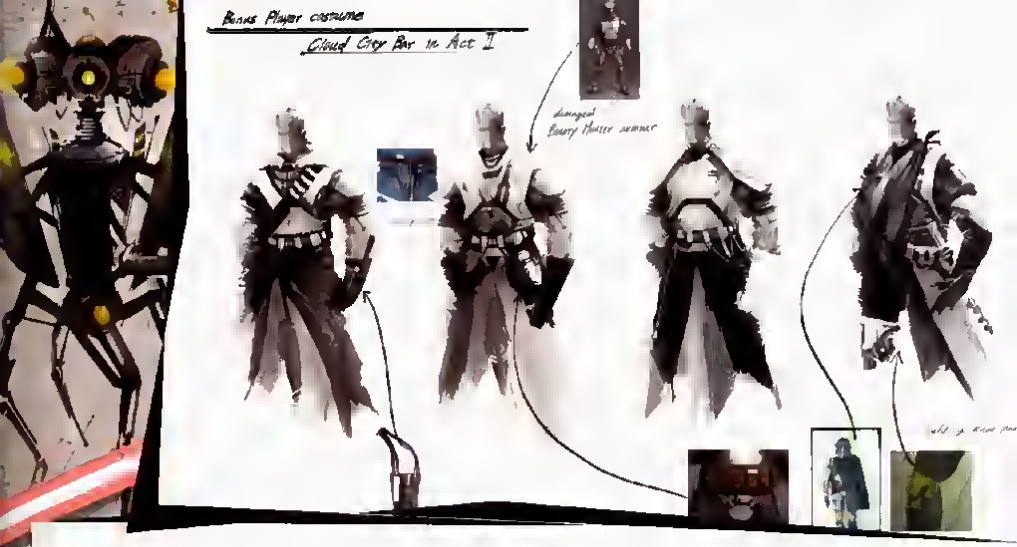
Lucas had approved the entire story synopsis and the character descriptions without any requested changes or revisions. He also answered in the affirmative each of their questions, approving the use of Leia, Bail, and key events. Even more exciting, he had jotted a handful of notes in the margins, providing further ideas and insights such as "Bail is just one of the Alliance leaders." These notes would become important as the story evolved during later script-writing sessions.

After nearly eighteen months of creative exploration, concept art work, writing pitches and story outlines, focus testing, prototyping, and pre-vis animation, the team knew the story they would tell and the game they would build. Now, the real work could begin.

Characters

Chapter Three

APPRENTICE MODEL
Anatoly Ilinykin



CLOUD CITY COSTUME EXPLORATIONS
Chin Ko

The Cast

During development of The Force Unleashed, George Lucas continually stressed the importance of compelling characters who could bring drama to the game through interesting interactions with the player and who were just as memorable and well-developed as Luke Skywalker, Princess Leia, and Han Solo. Lucas specifically requested that the team create characters who represent familiar mythical archetypes—a flawed protagonist, a love interest, a comic sidekick, a mentor—much as he had done when creating the original *Star Wars*. The developers were thus determined to create personages reminiscent of existing *Star Wars* archetypes, but not carbon copies of established characters.

The Apprentice: Early Explorations

No other character featured in The Force Unleashed generated as many explorations—and heated debates—as the protagonist, known only as "the Apprentice" from the very first concept sketches.

Haden Blackman and Art Director Matt Omernick provided the initial direction to create a character who would be instantly recognizable as a *Star Wars* villain and who would not look out of place standing next to Darth Vader. Given this direction, artists and designers worked together to generate a long list of possible characteristics for the Apprentice: "sinister," "dark," "menacing," "powerful," "armored," "masked," and even "tragic."

The first rounds of concept explorations involved hundreds of quick sketches, including numerous mask and helmet studies. Nearly all of the explorations had recurring themes. Design elements reminiscent of Darth Vader were common, including shoulder pads, sloping helmets, breathing apparatuses, and chest-mounted devices.

While more than half of the early studies had the Apprentice wearing a helmet, mask, or hood, concepts that exposed his face almost universally drew on Anakin Skywalker for inspiration. These concepts depicted the character as a young, brooding man with at least one striking or distinctive feature, such as a facial scar, tattoo, or glowing cybernetic eyes.

Creating new Imperial armor was another common theme. These concepts usually resembled new stormtrooper variants, mixing recognizable armor pieces, full helmets, and the stormtrooper's distinctive black eyepieces with Sith-inspired additions, such as capes, skirts, and even arcane-looking decals.

JEDI DAD COSTUME VARIANTS
Chin Ko

APPRENTICE HEAD STUDIES
Amy Beth Christenson

KASHYYYK COSTUME
Chin Ko

BATTLING THE JUNCTION
Stephen Chang

FATTY COSTUME STUDIES
Grey Knight

DEATH STAR COSTUME
Manny Llanas

After the first round of explorations, Blackman and Omernick began refining their vision of the Apprentice based on the evolving story, what they knew of his interactions with other characters, and some focus-test data. Their specific feedback for the next round of studies included:

The Apprentice needs to be clearly human. Focus test feedback confirmed that players felt it would be far easier to relate to and empathize with a human character, and they wanted to know that the character was human from the outset. Although masks and helmets were interesting design elements they often made the Apprentice look like an alien or a droid, so they were generally discouraged. Overly detailed armor, cybernetics, and even tattoos often had the same effect.

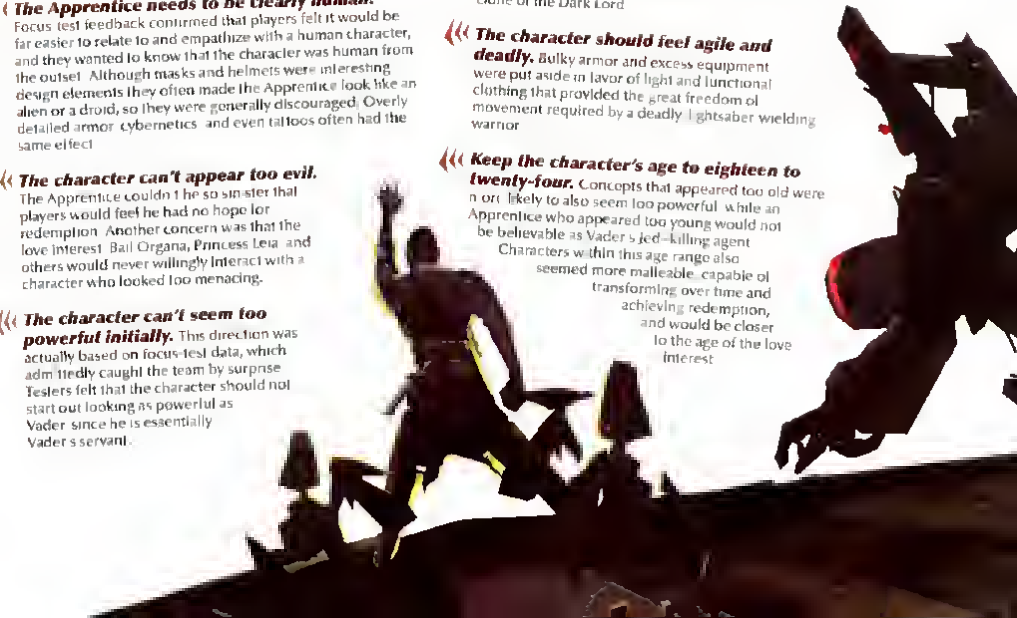
The character can't appear too evil. The Apprentice couldn't be so sinister that players would feel he had no hope for redemption. Another concern was that the love interest, Bail Organa, Princess Leia, and others would never willingly interact with a character who looked too menacing.

The character can't seem too powerful initially. This direction was actually based on focus-test data, which admittedly caught the team by surprise. Testers felt that the character should not start out looking as powerful as Vader, since he is essentially Vader's servant.

The character needs to feel unique. The stormtrooper variant designs were rejected because they made the Apprentice seem like a member of the huge army of faceless, nameless, and expendable clones rather than a special, irreplaceable assassin. Tattoos were too derivative of Darth Maul, and too many "Vader esque" elements made the character feel like a clone of the Dark Lord.

The character should feel agile and deadly. Bulky armor and excess equipment were put aside in favor of light and functional clothing that provided the great freedom of movement required by a deadly lightsaber wielding warrior.

Keep the character's age to eighteen to twenty-four. Concepts that appeared too old were more likely to also seem too powerful, while an Apprentice who appeared too young would not be believable as Vader's Jedi-killing agent. Characters within this age range also seemed more malleable, capable of transforming over time and achieving redemption, and would be closer to the age of the love interest.



Attack Dog

When the concept artists began their second round of explorations, it rapidly became clear that the Apprentice might never materialize unless the artists had a strong "hook" or theme upon which to build. We solved our Apprentice dilemma by further defining Vader. Specifically, Blackman and Omernick described Vader as a volatile father-figure and an uncaring, unrelenting drill sergeant. The concept artists then concentrated on extrapolating the Apprentice's appearance and personality based on his relationship to Vader.

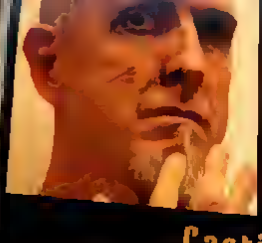
Working with Omernick, senior concept artist Amy Beth Christenson envisioned the Apprentice as "Vader's attack dog." She already knew that Vader had kidnapped the boy when he was a young child, and had kept him isolated during his early training. She also imagined that as the Apprentice reached adolescence and his powers grew, Vader would need to keep him restrained somehow. Eventually, Vader's psychological hold over the Apprentice would be so great that the Dark Lord would no longer need shackles or other devices to keep the boy in line—but would force him to wear broken restraints so that he would always be reminded of his early imprisonment.

Christenson also theorized that once the Apprentice could fend for himself, Vader would no longer be concerned with providing any kind of "parental" care. If the Apprentice returned from a mission with tattered clothes or open wounds, Vader would barely notice and never think to secure him a new uniform or medical attention.

With all this in mind, Christenson began a very focused round of studies that showed a young man who resembled a prisoner in a labor camp more than any Jedi or Sith character. He was gaunt and pale from years of living in isolation with only subsistence-level food. Beneath a slimmer, leather version of Vader's shoulder pads, his functional clothing was ripped, torn, and bloodied. His head was shaved for the ultimate low-maintenance haircut, and scars laced his arms, chest, and back. A broken and sparking shackle on one wrist and a painful shock collar around the Apprentice's neck served as symbolic reminders of Vader's complete control over the character.

While the details of these initial sketches would change over time, and there would still be many more revisions to the character before the game's release, the first wave of "Apprentice as attack dog" concepts set the direction for everything else to come, and informed the Apprentice's personality and even his dialogue.

BAXUS PRIME (ACT I) COSTUME
Amy Beth Christenson



Casting The Force Unleashed

The idea of using hired actors to voice a character in a game is nothing new, nor is capturing an actor's likeness and using it in-game—which has been happening for years on the current gen platforms—but because of improving motion capture technology the results are becoming even more stunning and life-like, and casting the right actor for any given part is therefore even more critical.

So, how did we go about deciding who the actors in our game would be? Well, like a lot of things on The Force Unleashed, it began with concept art. After hundreds of explorations the team began to hone in on a look that was appropriate for the character in question. Once the look was established it was time to look into casting an actor for the part.

For The Force Unleashed, the onus of finding the perfect candidates rested on the shoulders of Senior Manager of Voice and Audio Darragh O'Farrell. Darragh and his team began by contacting a few talent agencies and giving them information and concept art about each character. Once the agencies provided the team with photos of whom they thought would fit the role, Darragh and Haden went through hundreds of head shots. The Force Unleashed team wanted to find an actor who matched—or came as close as possible, to the concept art. Of course, if an actor was discovered who fit the role perfectly in most ways but didn't necessarily look like the concept art, the team would be amenable to tailoring the character to fit the actor's look.

Next up was the audition process. The voice team, headed up by Darragh, flew down to Los Angeles to meet the handpicked candidates. During the auditions the actors read opposite David Collins, LucasArts sound designer extraordinaire, while Darragh directed. From the initial LA auditions the team had very strong candidates to fill the roles of three high-profile characters. The Apprentice, Juno Eclipse, and Maris Brood. In fact, the roles for both the Apprentice and Maris Brood were filled from the first LA auditions—Sam Witwer, a prolific television and screen actor who has appeared most recently in *Battlestar Galactica* and *Dexter*, and Adrienne Wilkinson, who played the role of Xena's daughter Eve on *Xena: Warrior Princess*.

When casting Darth Vader's Secret Apprentice, we were especially hard on Sam. Dave knew Sam... they're friends, and Dave threw Sam's hat into the ring. That said, there were things that put Sam far above the other candidates.

In his audition, there was a scene with the Secret Apprentice sitting on the floor of a meditation chamber, using the Force to assemble a lightsaber with his mind alone. The scene offered no real descriptions of the action, had no dialogue—it was up to him to decide how to play the scene. Sam contorted his features, as if struggling to remember something long forgotten. He later explained his logic: The Apprentice is totally unlike other Force-users. For others, a duel against a powerful opponent may be the most difficult thing they face, but for the Apprentice, finding a moment of inner peace is the true struggle. The most difficult thing for him is to concentrate—using his powers to do something that requires great control, such as assembling a lightsaber with his mind alone. Sam was thinking about this character at the same level we were, and he had put all of his *Star Wars* knowledge, considerate thought, and passion into the audition.

As for Juno Eclipse, the team decided they wanted an actress with a British accent, which, given *Star Wars* movie history, was no big surprise. The next stop for Darragh and the gang was London, England. This time however, Darragh's team didn't go through a talent agency, but used the services of casting director Kate Saxson. A number of candidates were selected and called in for auditions. Model/actress Nathalie Cox, who appeared as Orlando Bloom's wife in *Kingdom of Heaven*, was chosen to fill the role of Juno.

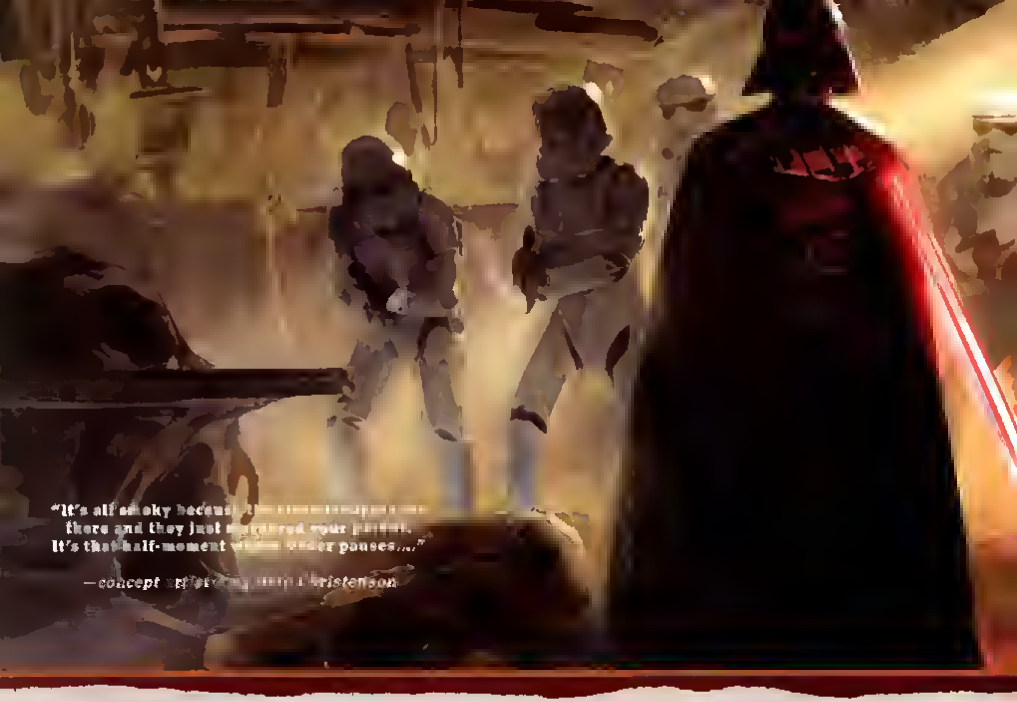
So concluded an almost four-month journey to find actors for some of the major characters who you will see and hear in The Force Unleashed.

—Brett Rector and W. Haden Blackman

ABOVE LEFT:
...Y FREDERICKSEN IN MAKEUP AS GENERAL KOTA.

ABOVE MIDDLE:
NATHALIE COX AS JUNO ECLIPSE

ABOVE RIGHT:
ZED DRIES (L) AND SAM WITWER (R) AS THE APPRENTICE



VADER FINDS HIS APPR
Amy Beth Christen

Darth Vader

Darth Vader was mentioned in nearly every concept we developed. Once we decided to set the game between Episodes III and IV, it became critical that Vader play a central role. George Lucas had stressed that the *Star Wars* saga is, in many ways, Vader's story, and The Force Unleashed would need to be a continuation of that story.

As we searched for the story, Darth Vader's role changed several times. In several drafts, Vader was grooming a number of potential apprentices, designed to become the player character's enemies. In other storylines, Vader sought to increase his power before confronting the Emperor by searching for Sith relics or even the spirit of Darth Plagueis. In one discarded plot, Vader's desire to overthrow the Emperor was supplanted by his quest for immortality and a possible means of resurrecting Amidala.

Despite Vader's appearance in all six films and hundreds of other sources, we didn't quite understand who he was as a character between the two trilogies. Lucas clearly defined Vader's personality, motivations, and relationship with the Emperor between the two trilogies. Based on our conversations with Lucas, we wanted to convey that Vader is somehow broken by his transformation at the end of Episode III and, ultimately, under the Emperor's heel, regardless of what he tells the Apprentice or himself. By including scenes in which Vader's loyalties are tested, the Emperor's true feelings about his master's suffering firsthand, we hoped to further develop Darth Vader as a character and provide greater insight into his emotions and motivations during the classic trilogy.

Vader posed a significant gameplay challenge as well. We decided that the opening level of the game would allow the player to take on the role of Darth Vader in a "prologue level" that reveals how the Sith Lord discovers his Apprentice. However, Vader as a playable character is extremely different than the Apprentice. While the Apprentice is fast, acrobatic, and agile, we wanted Vader to be a hulking, deliberate character who seethes with physical strength and resilience. His movement is measured and determined, like "an unstoppable movie maniac"—someone who could not be knocked off course, killed, or even seriously injured. To capture this feeling, we decided that Vader would not run, but walk at a commanding pace, pushing, throwing, or cutting down any enemies who entered his path. We also decided to set Vader's power levels well above the Apprentice's starting power levels to give players a glimpse of what they can become later in the game and help build tension when players realize that they will inevitably be forced to fight this fearsome character.

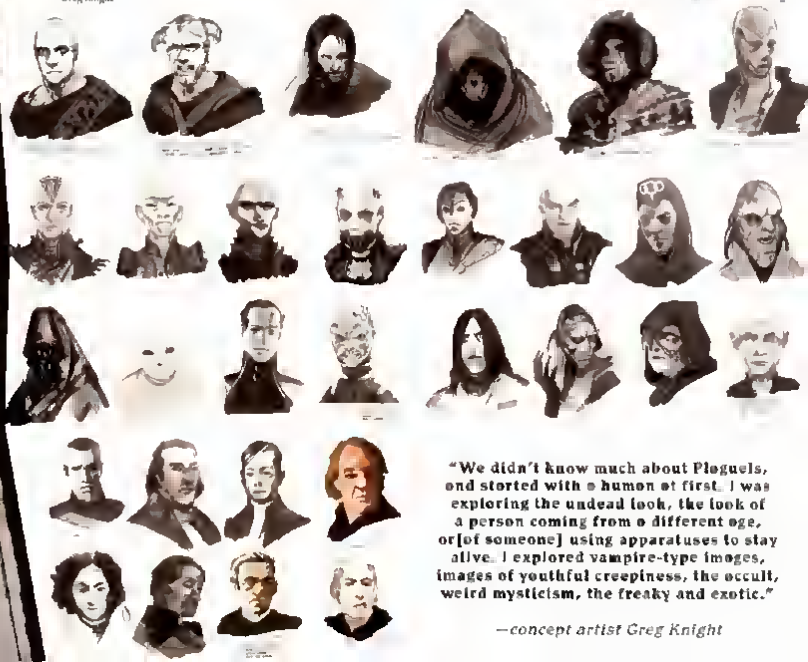
Darth Plagueis

DARTH PLAGUEIS CONCEPTS
Greg Knight

During the story explorations the team often looked to previously undeveloped characters and events for inspiration. One character that had always captivated us was Darth Plagueis. According to Emperor Palpatine in *Revenge of the Sith*, Plagueis learned how to use the Force to prevent his loved ones from dying, only to be killed by his apprentice- Darth Sidious.

Initially we planned to use Plagueis as a Sith spirit, who would have provided the player with new dark side powers, hints, and information. In another possible story, the Apprentice was sent to find Plagueis as part of Vader's mad plot to resurrect Padme. Other ideas included revealing that the Apprentice was, in fact, a reborn Plagueis and using a reformed Plagueis as the Apprentice's mentor.

DARTH PLAGUEIS CONCEPTS
Greg Knight



"We didn't know much about Plagueis, and started with a human at first. I was exploring the undead look, the look of a person coming from a different age, or [of someone] using apparatuses to stay alive. I explored vampire-type images, images of youthful creepiness, the occult, weird mysticism, the freaky and exotic."

—concept artist Greg Knight

Juno Eclipse

The character who would become Juno Eclipse was not actually part of the concept development until George Lucas asked the team to include an element of romance in the story. When faced with creating a compelling love interest for the Apprentice, we definitely wanted to follow in the tradition of the Han Solo–Princess Leia relationship, which meant creating a strong female lead that could be viewed as another protagonist.

As we began to develop the "Love Interest," we were adamant that Juno should be the Apprentice's equal in many ways, and fought against ideas that might turn her into a stereotypical damsel in distress. While we did not want to complicate the story by making the love interest another Force-wielder, Juno still needed to have some sort of trait or characteristic that the Apprentice does not share. We also wanted Juno to be unusual or unique among *Star Wars* characters. Finally, we knew that we would need to introduce her early in the story to give her relationship with the Apprentice (and the player) plenty of time to develop.

Given all the criteria surrounding the character, an Imperial officer seemed appropriate. This would allow us to introduce Juno early—she is handpicked by Vader to aid the Apprentice in his missions. And while a female Imperial officer is not completely unheard of in the extended continuity, they are very rare and have never been seen in the films, which makes Juno fairly unique. As a child, Juno was an aspiring xenobiologist, fascinated with alien worlds and species, which gives her knowledge that the Apprentice does not possess. She is also described as a crack pilot and mechanic, to draw some parallels to Han Solo. As the script evolved, we were always careful to ensure that she never seemed subservient to the Apprentice in any way—she views herself as serving Vader, and as the Apprentice's peer.

We did explore (and reject) a few twists and turns for Juno's character. At one point, we toyed with the idea of making her a double-agent, an Imperial pretending to be a Rebel spy in order to gather information about the nascent Rebellion for Darth Vader. The most extreme twist revealed Juno as one of the Emperor's agents—a Force-wielding assassin who would ultimately become the Apprentice's enemy. These ideas were later ditched because they complicated the story unnecessarily, lessened the Apprentice's role as the first Rebel, or made the romance between the two characters untenable.

Once Juno was identified as a loyal Imperial officer and pilot, her appearance was fairly easy to develop. The most challenging element of developing the character's look involved defining how she would evolve over time. Juno ultimately defects from the Empire with the Apprentice so she would therefore need to wear a second costume that didn't reveal her Imperial background when interacting with other potential Rebels. We decided to keep the designs simple. During the game's first act, Juno wears a functional and flattering Imperial flight suit. When forced to leave the Empire behind, Juno simply removes the flight suit's jacket, revealing a more casual look underneath.

"Captain Juno Eclipse. Born on Corulag, where she became the youngest student ever accepted into the Imperial Academy. Decorated combat pilot with over one hundred combat missions, and commanding officer during the Bombing of Calloa. Hand-picked by Lord Vader to lead his Black Five Squadron, but later reassigned to a top-secret project... "
—PROXY

JUNO ECLIPSE MODEL
Craig Mulholt

Naming the Characters

Naming the main characters for The Force Unleashed proved to be one of the team's most difficult challenges. Blackman felt strongly that all of the characters should have memorable names that were easy to say and spell. He was also intent on names that had mythic qualities or were suggestive of the character (such as Han Solo).

Juno Eclipse was one of the first characters to receive an official name. Ironically, the name had almost been attached to another *Star Wars* character. Several years prior, Blackman had been asked to write the backstory for a new female Sith villain to be based on unused prequel trilogy concept art. After developing her history and character profile, Blackman proposed that the villain's real name not be revealed, but that she instead use a codename—Juno Eclipse—in her early appearances. The name was rejected by Lucas Licensing as not villainous enough, and the character eventually became known as Asalt Ventress.

Naming the Apprentice proved a much more arduous task. Originally, we had not planned to give the Apprentice a real name or even a call sign, preferring to keep that aspect of the character mysterious (something George Lucas encouraged). We always referred to him in design documents and scripts as simply "the Apprentice." However, Lucas Licensing ultimately felt that the character would need at least a call sign for the novelization. Several team members suggested "Starkiller"—a reference to the original draft of *Star Wars* which featured a hero named "Anakin Starkiller."

JUNO ECLIPSE COSTUME CONCEPTS
Amy Beth Christenson

GENERAL KOTA MODEL
Yoon Kim
GENERAL RAHM KOTA
Amy Rose Christensen
JEDI GENERAL

EARLY JEDI MENTOR CONCEPTS
Greg Knight

General Rahm Kota

Like Juno Eclipse, General Kota was a late addition to the story. George Lucas had suggested that the Apprentice should eventually meet a traditional Jedi mentor who could ultimately replace Vader. However, as with Juno, we wanted to provide a new take on the familiar archetype and portray a different kind of Jedi mentor.

Blackman and lead designers John Stafford and Richard Davis started defining the character by establishing a few key facts. They knew, for example, that the Mentor would need to be a character who had survived Darth Vader's Jedi Purge and disappeared into hiding. They then tried to imagine what the years of isolation—living in a state of paranoia and

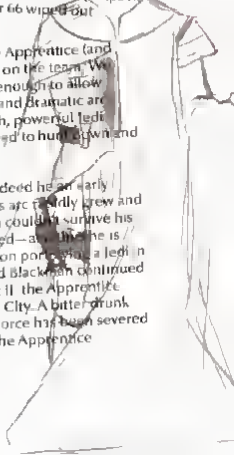
fear—would do to a Jedi. Working with the concept artists, they explored Mentors who were insane, enraged, and on the verge of falling to the dark side themselves. They also considered Mentors who were physically damaged as well—blind, paralyzed, even limbless.

Ultimately, the team returned to the familiar Jedi Masters—notably Qui-Gon Jinn—and began developing a mentor who would be a sharp contrast to these characters. Where Qui-Gon is sensitive and eloquent, Stafford described General Kota as "hard-boiled"—unsentimental, hardened, tough, and cynical. Kota harbors a strong sense of honor and a deep love for the Jedi Order, both of which he feels Darth Vader has betrayed. In the years since Episode III, Kota has become bitter, frustrated, and consumed with a desire to lash out at the Empire.

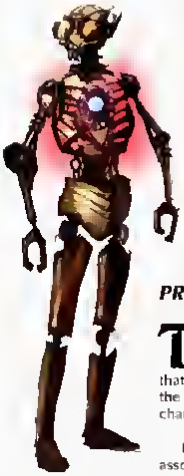
As with many other areas of the design, Kota's final appearance and fighting style were heavily influenced by Asian cultures and history. Inspired by Kota's sense of honor, concept artist Amy Beth Christenson modeled the character after the samurai of feudal Japan. Over time, Kota's appearance became a bit more disheveled—a tattered cloak, dented armor, deep facial scars—to suggest the hardships he has endured since the Emperor's Order 66 wiped out the Jedi.

How Kota would be introduced to the Apprentice (and the player) was a subject of much debate on the team. We wanted to introduce the character early enough to allow for some sort of character development and dramatic arc. Fortunately, the story already had a tough, powerful Jedi character—the Apprentice would just need to hunt down and fight Kota during their first meeting.

Once we decided that Kota would indeed be an early target for the Apprentice, the character's arc rapidly grew and evolved. Stafford was adamant that Kota couldn't survive his encounter with the Apprentice unscathed—and, like Juno, is blinded at the fight's climax. Still intent on portraying a Jedi in an entirely new way, Davis, Stafford, and Blackman continued to break down Kota even further. In Act II, the Apprentice finds Kota passed out in a bar on Cloud City. A bitter drunk, Kota claims that his connection to the Force has been severed and he seemingly does not recognize the Apprentice.



TOP:
KOTA HAIR AND COSTUME STUDIES
Amy Beth Christenson



PROXY CONCEPT
Greg Knight

PROXY CONCEPT
Greg Knight

PROXY

The last of the game's four new characters who form the core of the cast, PROXY serves the role of comic-relief sidekick. As with the other archetypes, Lucas felt that including a sidekick who could bring some comedy to the story was essential. But where would a "comic relief" character fit within the game's dark story?

From the outset, the team knew that the Apprentice's associate needed to be a droid. An alien sidekick might draw unwanted attention, but droids are ubiquitous throughout the galaxy and would hardly warrant a second glance from Imperials or anyone else. Ensuring that the Apprentice and his pal had a long-standing relationship (much like Han Solo and Chewbacca) was also important, as droids don't really age; the sidekick could have been part of the Apprentice's life for years. Finally, droids can be programmed with loyalty, so Vader would never have cause to question or doubt the sidekick.

Next, Blackman, Davis, and Stafford asked themselves "How is the sidekick 'comic'?" and focused on creating a character that was familiar but new. They tried to steer well clear of any resemblance to C-3PO—the sidekick could not be panicky or frantic, for example. They also fought against comparisons to HK-47, a calculating and unapologetically sinister assassin droid from the Knights of the Old Republic video game.

The team members were also working to develop the PROXY's special abilities and relevance to the story. The trio wanted the character to be able to do things that no other *Star Wars* character has done before. Yet again, a solution came from looking at Vader. If Vader gave a droid to the Apprentice (or, at least allowed the Apprentice to keep a droid), that droid would need to have some programming or function valued by the Dark Lord. The next idea was fairly obvious: PROXY would be a kind of training droid, designed and programmed to duel with the Apprentice and help hone his skills.

To fulfill his primary function, the droid would need to be incredibly resilient and deadly, programmed with a wide range of fighting styles and equipped with advanced technology that would enable him to emulate a Jedi's powers and lightsaber attacks. When writing PROXY's dialogue, Blackman found the "comic" element of the sidekick by contrasting the droid's excessively sadistic primary programming—"kill the Apprentice"—with a naive, sincere and innocent personality. The resulting character desperately wants to please the Apprentice by fulfilling his primary programming, but does not realize that doing so would be decidedly bad for the Apprentice.

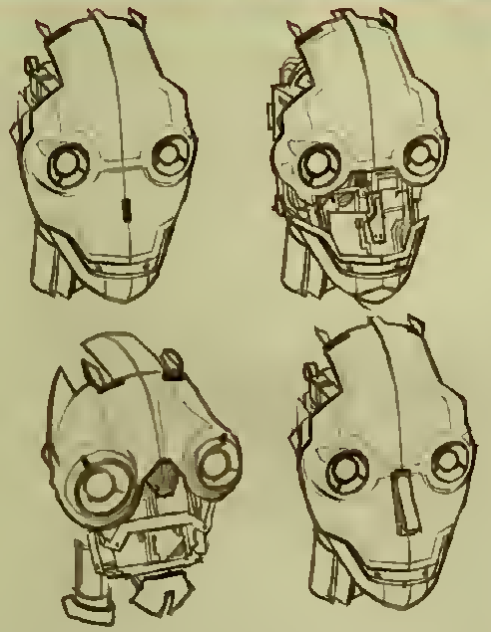
As the droid sidekick began to take shape, Blackman was wrestling with another big story problem: how to keep Darth Vader center stage throughout the plot. In early drafts, Vader basically disappears from the story after the Apprentice leaves the Empire and begins forming the Alliance. Blackman knew that Vader could communicate with the Apprentice via hologram, but a scene between the Apprentice and a grainy blue hologram version of Vader might not deliver the same tension and drama as a scene in which the Apprentice was forced to confront the Sith Lord in the flesh. To solve this dilemma, the design team suggested that the droid sidekick's list of abilities include an advanced hologram array and transforming chassis, which would allow him to take on the appearance of a wide range of humanoids—including Vader. Thus, whenever his Master needed to talk to the Apprentice, the droid could literally become Darth Vader. With this final ability, PROXY was born. His name came from his ability to actually become another character's "proxy" when communicating with the Apprentice.

PROXY CONCEPTS
Greg Knight

PROXY CONCEPT
Stephen Chang

FRONT MODEL
Money Diaries

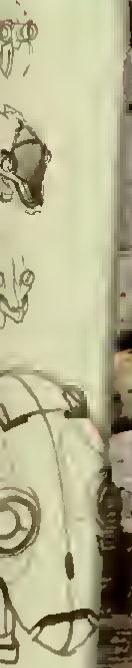
Stephen Chang



"We wanted to see him almost under construction, like C-3PO when Anakin first built him. We wanted to give him an almost friendly-looking face, someone trusting and not aggressive at all."

—concept artist Stephen Chang

PROXY HEAD STUDIES
Stephen Chang



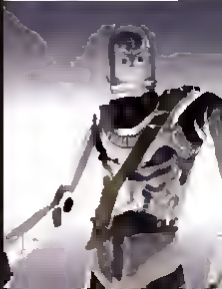
CORPSE DROID CONCEPTS
Greg Knight

The Death of Corpse Droid

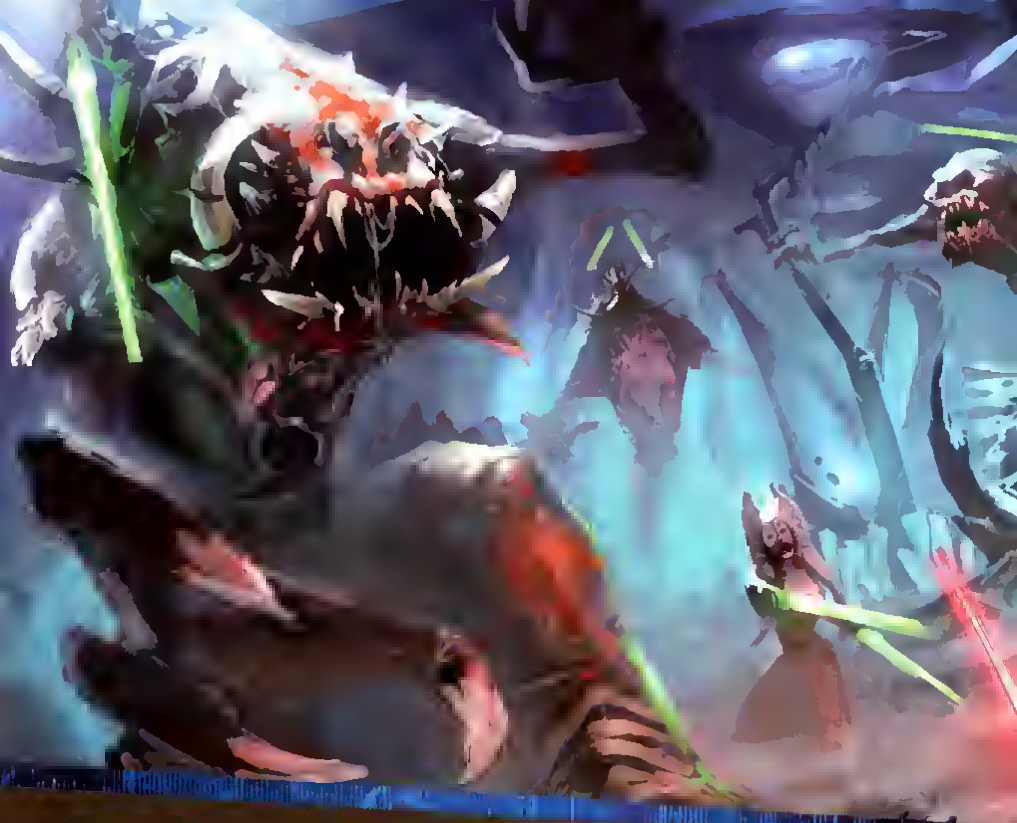
During the early brainstorming sessions for the Jedi Outlaw concept, the team had focused heavily on villains the player would need to hunt down. One of these characters was a reverse cyborg. If a cyborg is someone who replaces organic parts with mechanical devices, the reverse cyborg would be a demented droid obsessed with upgrading all of his mechanical parts with organic replacements. As a villain, the droid would have gone to any extremes to secure fresh parts—including cold-blooded murder. We envisioned the villain evolving over time as he gained new organic parts, both human and alien. Even after the Jedi Outlaw concept was shelved, the notion of a reverse cyborg (or "corpse droid" as he became known internally) kept resurfacing. The character was positioned as a secondary villain in both the Rebel Jedi concept and early drafts of what would become The Force Unleashed.

When we began working on the "comic droid sidekick," we initially put the reverse cyborg into this role. The character's backstory still allowed for him to be a training droid, but a glitch in his programming gave him a twisted fixation with becoming an organic being. The character would still evolve, adopting parts from the enemies that the Apprentice defeated.

As Kota, Juno, and the Apprentice took shape, however, we realized that the corpse droid was too outlandish and would not fit the group dynamic we wanted to create. We felt that the character would be successful only as a dark comic sidekick and only if the script completely overemphasized the droid's sick hobby, this in turn would create a character who was far too mature and horrific for a Teen-rated game.



CORPSE DROID CONCEPTS
Greg Knight



Shaak Ti

One of the few remaining Jedi after Order 66, Master Shaak Ti was a powerful and respected member of the Jedi Council—and a perfect target for Darth Vader's Secret Apprentice. Those who watched the deleted scenes on the *Revenge of the Sith* DVD may recall a sequence in which Shaak Ti was killed at the hands of General Grievous (she was also killed by Anakin in another cut scene), but Lucas has confirmed that—because those scenes were deleted from the final film—her death wasn't official canon. With Shaak Ti's fate still undetermined, the Force Unleashed team decided to incorporate the character and tie up this loose end from the prequels. But how to use the iconic character became a topic of much debate.

Early on in the game's development, Amy Beth Christenson began creating studies that showed the soft-spoken Jedi Master as a protector and guardian for a young Princess Leia. As the story began to take shape, Shaak Ti's role grew. Instead of appearing in a minor cameo, she became a major mission objective for the Apprentice, who is tasked with finding and defeating her. The Apprentice's search for Shaak Ti takes him to the technologically devoid planet Felucia, where she has been seeking to bring balance to the Force and train Force-sensitive native Felucians. As revisions were made to the script, Shaak Ti was eventually given an apprentice of her own in the impetuous Maris Brood. With Maris at her side, her motives also changed: Shaak Ti feels responsible for keeping the Jedi Order alive, a mission she can accomplish only by protecting Maris from Darth Vader's mysterious assassin.

BOSS BATTLE AGAINST SHAAKTI AND ACOLYTES
Amy Beth Christenson

"Early on, I hoped that you would be fighting Force Witches on rancors."

—concept artist Amy Beth Christenson

SHAAKTI ON FELUCIA
Amy Beth Christenson

"You are Vader's [illegible]. But your power is wanted [illegible]. You could be so much more. I, your boy, the Sith always betray one another. But I'm sure you'll learn that soon enough."

Kylo Ren

SCENE 39

JUNK JEDI COUNCIL ON RAXUS PRIME
Amy Beth Christenson

Kazdan Paratus

Even before receiving feedback from George Lucas, The Force Unleashed team was intent on infusing the story with a host of new characters, particularly new Jedi. Although Order 66 had been issued in *Revenge of the Sith*, and many of the Knights were killed during that initial purge, Lucas confirmed that many Jedi could still be roaming the galaxy or hiding out from Vader's forces.

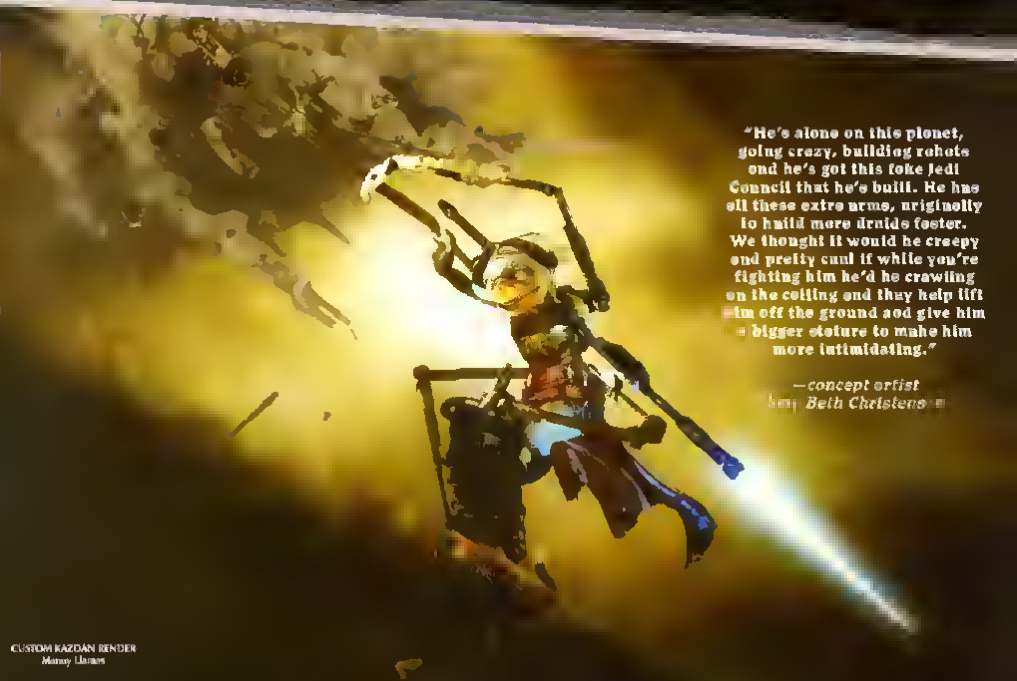
To contrast with the nature oriented Shaak Ti, we turned to creating a Jedi who—not unlike Anakin—would be much more technologically inclined. We also knew early on that we wanted to include the junkyard planet, Raxus Prime, as a central location. Kazdan thus began in his short bio as an "accomplished droid maker who has retreated to Raxus Prime after Order 66. He has become paranoid and addled, and has surrounded himself by a droid army cobbled together from the junk that surrounds him." As Kazdan's bio grew, we added descriptive bits such as, "Of all the Jedi, Kazdan holds the unique ability to create one of a kind machines with well-defined personalities…"

KAZDAN PARATUS CONCEPTS
Amy Beth Christenson

Although Kazdan is an accomplished swordsman, he doesn't enjoy fighting and tries to avoid combat missions whenever possible. Prior to Order 66, Kazdan was sent out near the Outer Rim territories with a small contingent of clone troopers. However, all were wiped out in a matter of days, leaving Kazdan alone. He soon constructed his own formidable army out of Separatist battle droid scraps. In hindsight, this turned out to be very fortuitous, as Kazdan is able to escape the Emperor's purge and safely make his way to Raxus. Once there, Kazdan builds a legion of droid bodyguards to protect him from Darth Vader, should he ever find out about Paratus's whereabouts.

Early explorations of Kazdan showed him as a more brooding humanoid Jedi, wielding a double-bladed lightsaber. But the developers decided that a more exotic-looking alien would complement the other humanoid Jedi well. It was actually concept art from Krome Studios, the developer of the PlayStation 2 and Nintendo Wii games, which inspired the team to make Kazdan an Aleena and have him fight with a lightsaber staff and the aid of mechanical appendages.

UNTEXTURED KAZDAN MODEL
Manny Llanas



"He's alone on this planet, going crazy, building robots and he's got this fake Jedi Council that he's built. He has all these extra arms, originally to build more droids faster. We thought it would be creepy and pretty cool if while you're fighting him he'd be crawling on the ceiling and they help lift him off the ground and give him a bigger stature to make him more intimidating."

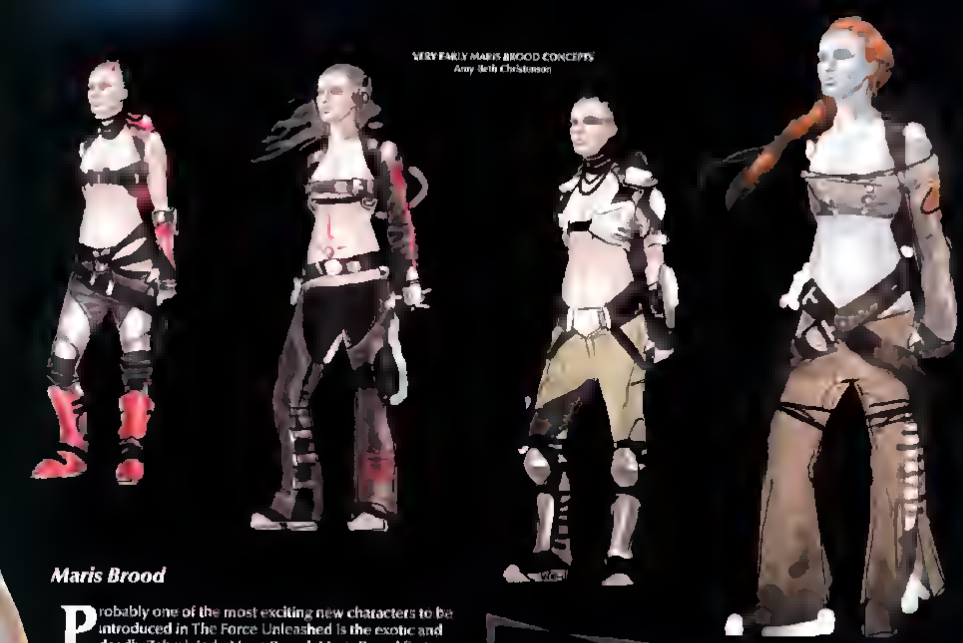
—concept artist Beth Christens

CUSTOM KAZDAN RENDER
Manny Llanas

ORIGINAL AND FINAL
MARIS BROOD MODELS
Craig Mallbell

"…was pirates, and I was excited about Maris being a leader of space pirates (sorry, Orn…which explains the get-up (*opposite*)."

…ep…ator *Amy Dem…*



VERY EARLY MARIS BROOD CONCEPTS
Amy Beth Christenson

Maris Brood

Probably one of the most exciting new characters to be introduced in The Force Unleashed is the exotic and deadly Zabrak Jedi, Maris Brood. Maris Brood first appeared in a series of concept sketches by Christenson, at a time when the team knew only that the game would involve a Force wielding hero. In fact, there was even a point during the development cycle when the team didn't know if the main character would be male or female, leading Christenson to create more than 100 unique concepts. As art director Matt Omernick began making selections from the many studies, Maris Brood immediately caught his eye. One of the key focal points that led to his immediate interest were the unusually shaped tonfa-style lightsabers that Brood wielded in the artwork. From that point on, Omernick and Blackman were determined that Maris would find her way into the game, though unsure in what context the character would appear.

As the first draft of the story began to take shape, Maris was cast in the role of an outlaw Jedi disguising herself as a pirate. According to early backstory documents, Maris was reared as a child by a Jedi who roamed the fringes of the galaxy, using his power and influence to help those less fortunate, often in ways that didn't exactly fit within the Jedi tenets. As a result of this unorthodox upbringing, Maris had never seen the Jedi Temple on Coruscant. During Order 66, Brood's Master was overwhelmed as he sensed the deaths of his brethren, but he had no clue as to what was actually happening. He went in search of answers, but never returned—leaving Maris without proper guidance. She went on to take control of a violent pirate band, trying her best to keep them in check, while setting up shop on Cloud City. But Brood's anger and fear slowly took hold of her, and she slipped slowly to the dark side.

Once the script for The Force Unleashed became solidified, Maris's backstory shifted slightly. Instead of assuming control of a pirate crew, Maris was consumed by rage, hatred, and fear upon learning that a fearsome Sith Lord—Darth Vader—had killed countless Jedi, including her Master. Maris set out to hunt down Vader and kill him in the name of vengeance. But before she could reach Coruscant, Maris was intercepted by Jedi Master Shaak Ti, who persuaded Brood to come with her to Felucia and become her apprentice. Shaak Ti wanted to reform the wayward Brood, but despite her best efforts, Maris's fear of Vader still torments her.

FELICIAN WARRIOR CONCEPT
Chris Yap

Felucians

In *Revenge of the Sith*, audiences were introduced to a new planet in the *Star Wars* universe, Felucia. A world covered by giant fungi of all shapes and sizes, Felucia is beautiful and colorful, but very little screen time was devoted to the planet in the film. In The Force Unleashed, the team rallied around the planet as a centerpiece of the game because of its connection to the prequels. The team was also excited about the prospect of creating an entirely new alien species, the native Felucians.

Creating the Felucians became one of the most challenging art and design tasks for the team. We knew from early on that the Felucians would be Force-sensitive warriors loyal to a Jedi (eventually identified as Shaak Ti). Our initial explorations centered on painted Amazons—an all-female army wielding a variety of lightsaber-like weapons and riding huge mounts. These early ideas were overtly inspired by the witches of Dathomir, a group that has appeared in Expanded Universe lore. Fearing that this approach would be derivative, Ommnick directed the concept artists to create a species reminiscent of the Tusken Raiders—humanoids well-adapted to their native terrain, but also fearsome and sinister. He was also intent on keeping their faces obscured behind bizarre masks, which would make the species creepy and mysterious.

In the context of the story, Felucians are said to be Force-sensitive. Shaak Ti knew about this valuable asset and realized that their planet, so lush with life, would be strong in the "Living Force." When she arrived on Felucia post Order 66, she trains them, teaching them to channel the Force for defense and healing. There are several types of Felucians in The Force Unleashed, including: warriors able to channel a small burst of energy, which they emit through their jawbone weapons; shamans capable of strengthening their allies during combat; and sub-chiefs, who can summon additional warriors to the battlefield.

FELUCIAN CONCEPTS
Lucas Animation Singapore

FELNIAN LIGHT / DARK STUDY
* WITH RAINFALL DESATURATED CHARACTERS SHOULD STAND OUT
IN SHADOW
IN LIGHT
IN LIGHT SKIN AND CLOTH DETAILING LESS CONTRAST WITH THEIR LOCAL ENVIRON THE SKINS GLOWING CAN BE MORE CLEARLY IN THE LIGHT
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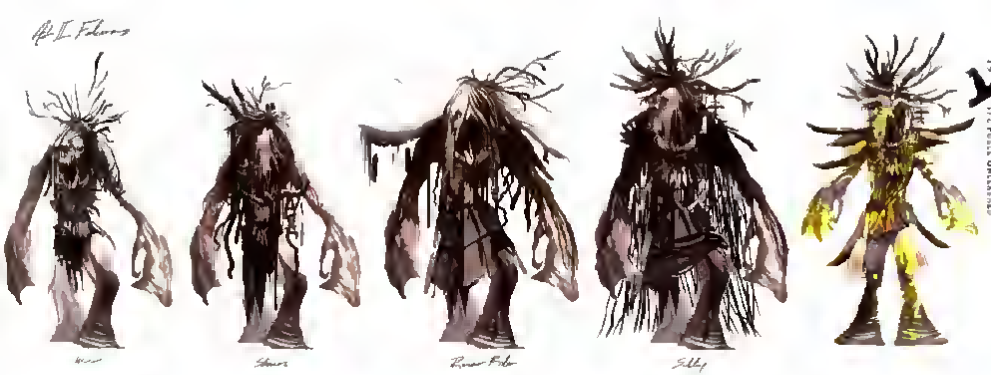
NON GLOWING SKIN CAN TURN ALMOST BLACK
LIGHT
GRADATION TO DARK
DARK



FELUCIANS CONCEPTS
Chris Voy and Steph'n Chong

Felucian Natives

LEFT
FELUCIAN MODEL
Yoon Kim

FELUCIA NATIVES
Chris Voy

LEIA COSTUME CONCEPTS
Amy Beth Christenson

Princess Leia

One of the most recognizable characters in the entire *Star Wars* saga, Princess Leia figured heavily in the earliest drafts of The Force Unleashed. The team was intent on using the young, beautiful Senator from Alderaan as a direct bridge to the original trilogy. As with Darth Vader, the Emperor, and other characters, we had to discuss the use of Leia with Lucas, ensuring that her role, actions, and involvement fit with his concept of the character and the time period.

Early on in the story's development, Leia was going to be a much younger character, living in relative seclusion on Alderaan, with Jedi Master Shaak Ti serving as her loyal guardian. Leia would have witnessed Shaak Ti's murder at the hands of the Apprentice, who would go on to redeem himself by protecting Leia from Vader. In another early story thread, when we were considering the use of Alderaan as a major location, the player would discover Leia secretly leading a small group of Mandalorians against the Empire.

Lucas was wary of using Leia in any major role, especially one that had her cross paths with Darth Vader. In addition, he didn't want Leia to prevent the team from creating new characters, something very important for this next chapter of the saga. Lucas wanted the game to have a strong love interest, and Leia could not serve this role given her young age and the fact that she ultimately falls in love with Han Solo. The team reworked the story to include Leia in a pivotal role, which Lucas ultimately approved.

As it stands in the final script, Leia is in her teens and has been sent to Kashyyyk by the Imperial Senate, allegedly as a "Senatorial observer" witnessing the enslavement of the Wookiees. In reality, Leia's trip to Kashyyyk is meant to be used against her father, Bail Organa, who has openly spoken out against the Emperor. The Emperor hopes that Bail will keep quiet if he knows his daughter is in Imperial hands on a potentially dangerous world, where it would be easy to describe her death as an unfortunate accident.

LEIA COSTUME CONCEPTS
Chris Voy

THE EMPEROR CONFRONTS BAIL
Greg Knight

Bail Organa

While there are a handful of characters that play a prominent role in the formation of the Rebel Alliance, no one in the *Star Wars* pantheon is more recognized for their contribution to the cause than the Senator from Alderaan, Bail Organa. Without question, nearly all of the early story explorations that bubbled to the surface featured both Bail and Princess Leia in pivotal roles, and they usually involved the elder Senator at odds with both Palpatine and Vader.

As the story began to take hold and the idea of forming the Rebel Alliance in *The Force Unleashed* was approved by Lucas, Bail's involvement was cemented. Initially, he was to take a back seat to his daughter, Leia, but as her role changed, Bail's grew larger and even more important. Blackman wanted to make Bail—one of his favorite Expanded Universe characters—a passionate and brave idealist who was actively aiding the Jedi, including Kota and Shaak Ti. Lucas approved the use of Bail as one of the founders of the Alliance, so Bail appears in several of the final story's most pivotal moments as a strong-willed, rational, and sympathetic character fully dedicated to ending the tyranny wrought by the Emperor.

"You're the first to really fight the Empire. We're not prepared to go to war yet. We need weapons and starships, and people with the courage to use them."
—Bail Organa

SCENE 73

BAIL ORGANA MODEL
Craig Mitchell

KOTA'S ELITE SOLDIERS
Chin Ko

Proto Rebel Brainstorms

"For the proto-Rebels *[above]*, I created wrist gauntlets that can resist lightsaber attacks."

—concept artist Chin Ko

EARLY KOTA SOLDIER CONCEPTS
Chris Trevas

More Alliance Characters

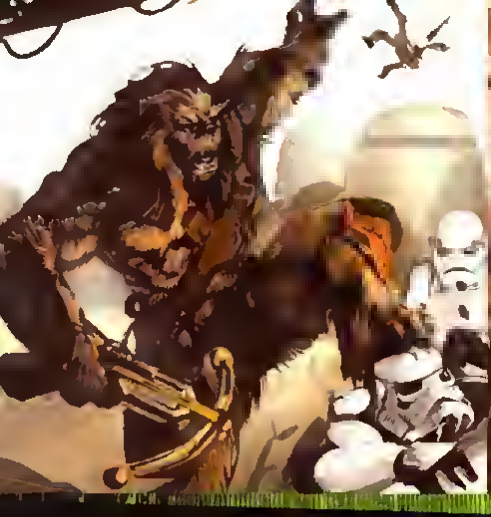
In addition to Bail and Princess Leia Organa, a handful of additional characters appear in the game from the movies and other *Star Wars* Expanded Universe material. Of particular note is the inclusion of Mon Mothma, who made brief appearances in scenes deleted from *Revenge of the Sith* (but which can be seen on the DVD). Her first appearance, however, occurred in *Return of the Jedi*. Additionally, the lesser known Garm Bel Iblis, who is mentioned in various novels and comic books, also makes an appearance. The continuity had already established that both characters were present at the formation of the Rebel Alliance, so the team wanted to make sure they appeared during those moments in the game.

In addition to the Alliance leaders, the team also needed to develop Kota's small army, a band of soldiers who have taken control of an Imperial TIE fighter construction facility. While not true "Rebels," we wanted these characters to be reminiscent of the Alliance soldiers seen in the original trilogy and achieved this by including familiar gear and helmets. Each soldier serves a specific gameplay need, whether it's a close quarters melee unit who uses an electroshock stick to try to fend off a lightsaber, an elite soldier armed with a portable blaster cannon, or a saboteur who uses the recognizable DH-17 blaster pistol and hurls detonation packs.

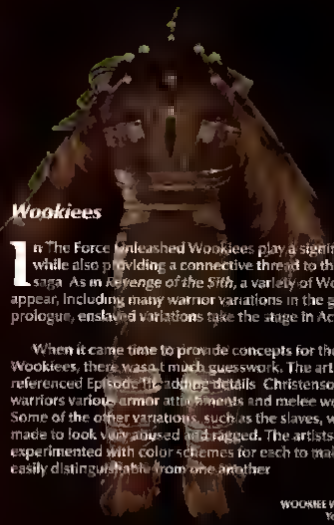
SENATOR MON MOTHMA
Chris Vay

TIGNAUGHTS
Chris Vay

EARLY KOTA SOLDIER CONCEPT
Chris Vay



REBEL WARRIOR CONCEPTS
Greg Knight



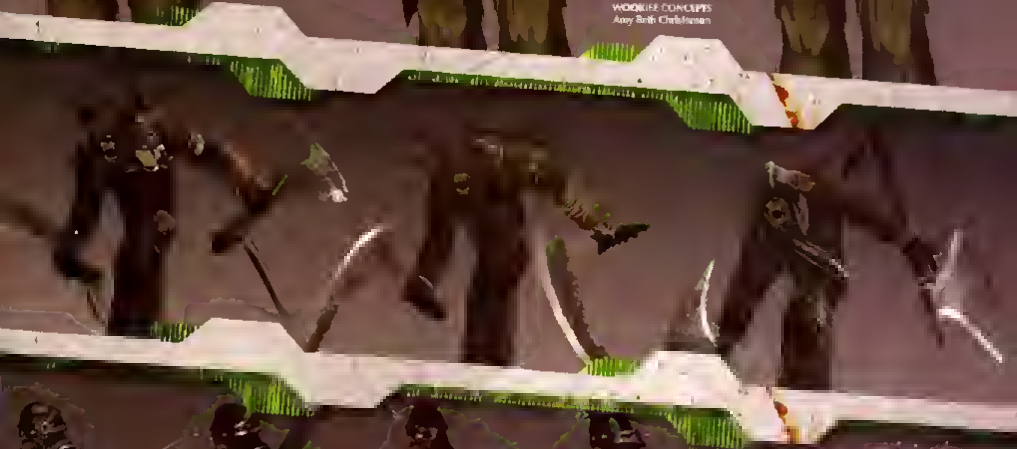
Wookiees

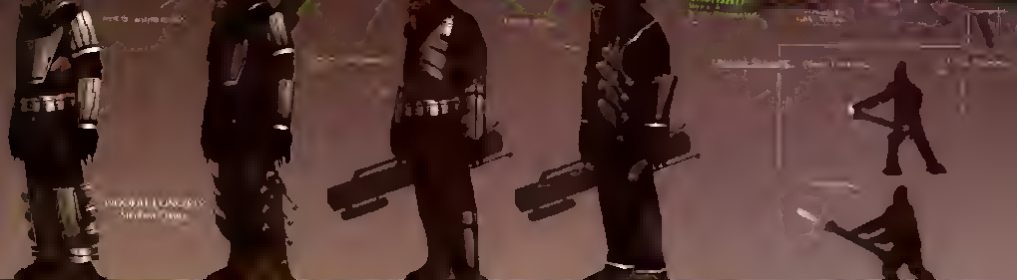
In "The Force Unleashed Wookiees play a significant role, while also providing a connective thread to the movie saga. As in *Revenge of the Sith*, a variety of Wookiees appear, including many warrior variations in the game's prologue, enslaved variations take the stage in Act II.

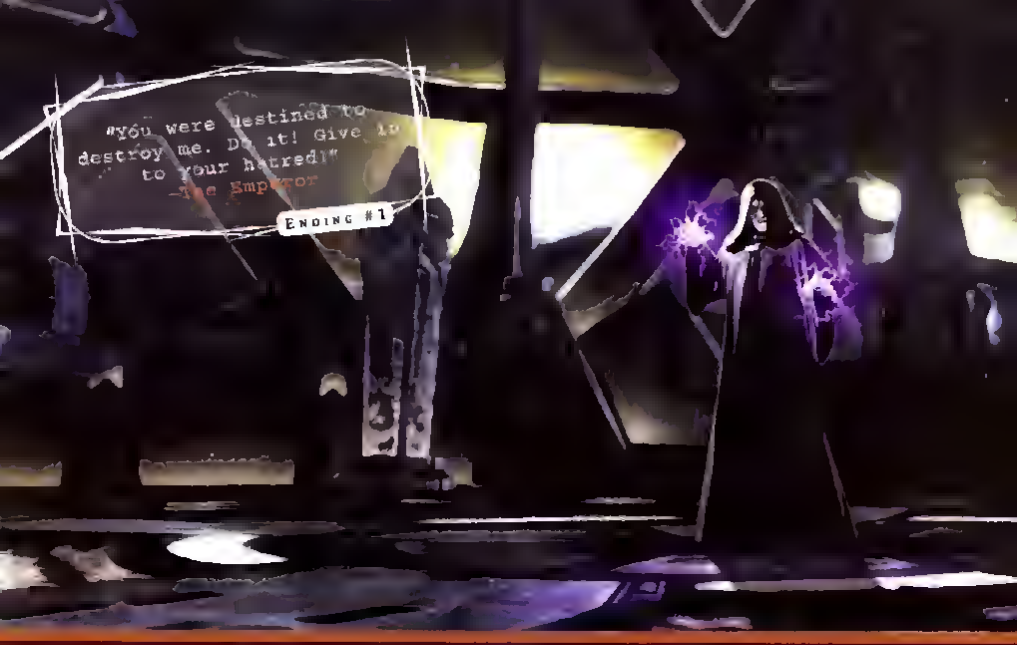
When it came time to provide concepts for the different Wookiees, there was a t much guesswork. The art team referenced Episode III, adding details. Christenson gave the warriors various armor attachments and melee weapons. Some of the other variations, such as the slaves, were simply made to look very abused and ragged. The artists also experimented with color schemes for each to make them easily distinguishable from one another.

WOOKIEE WARRIOR MODEL
Yoera Kim

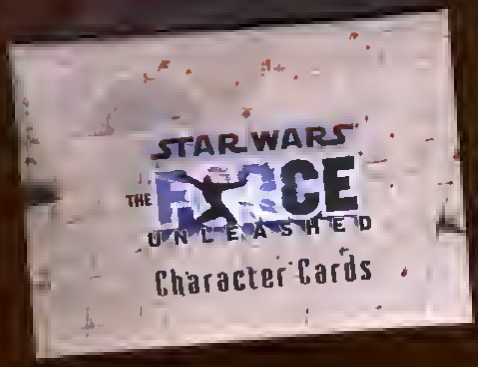
WOOKIEE CONCEPTS
Amy Beth Christenson







EMPEROR MODEL
Jhoang Roh & Dave Smith



The Emperor

While George Lucas asked the team to downplay Princess Leia's role in the game, he took an opposite approach with the Emperor, encouraging us to use him as a central villain in the story. In nearly all of our earlier drafts, the Emperor was referenced but seldom seen, a shadowy figure lurking in the background whose agenda, motivations, and actual involvement in Vader's schemes was never actually revealed

Ultimately, inclusion of the Emperor proved integral to the story, especially to key twists and revelations. Once it was decided that the main character was to be Darth Vader's Secret Apprentice, the team was faced with the dilemma of how Vader would keep this character a secret. If the Emperor was truly as omniscient as he seemed in the movies, it would be difficult to maintain that such a deception could go on without his knowledge. The way to solve this problem was, of course, to have the Emperor know about the Apprentice's existence, and in fact have him, not Vader, masterminding the plot to bring his enemies together for public execution. The Emperor would thus spread complete and utter fear throughout the galaxy and rule uncontested.

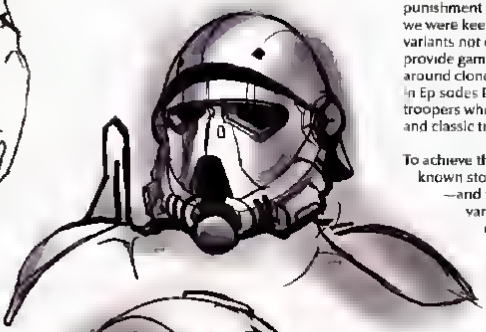
The Royal Guard and the Shadow Guard

The Emperor is constantly surrounded by those who wish to feed off his power. He is also protected by elite guards—silent, masked, red-robed soldiers commonly known as the Emperor's Royal Guard.

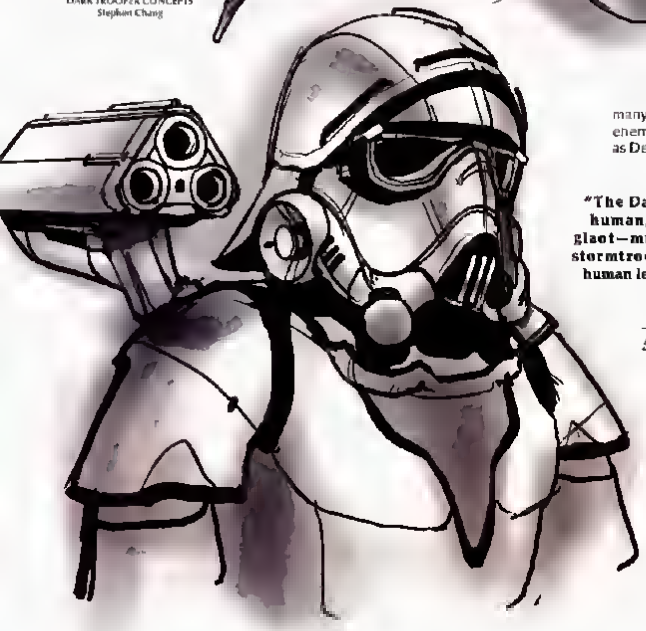
For The Force Unleashed, the team wanted to carve out a new soldier in the Emperor's vast arsenal of deadly minions and developed the Shadow Guard. This new character closely resembles the Royal Guard, but instead of using a Force Pike, the Shadow Guard carries a lightsaber staff and is capable of wielding minimal Force powers. Unlike the Royal Guard, who are seemingly always at Palpatine's side, the Shadow Guard are sent out on missions to deal directly with dissidents of the Empire.

IMPERIAL SHADOW GUARD MODEL
Jinung Roh

ROYAL GUARD COMBAT GEAR
Amy Beth Christenson



DARK TROOPER CONCEPTS
Stephen Chang



Imperial Troops

Probably the easiest decision the developers made for The Force Unleashed was the inclusion of Imperial troops. After all, if the game is going to occur in the era of the Empire, the Apprentice is going to need plenty of fodder to unleash his fury upon. Early concept art explorations showed the main character dishing out punishment on standard stormtroopers, but, as a team, we were keenly interested in creating new stormtrooper variants not only to provide more visual diversity, but also to provide gameplay variety. Our initial explorations revolved around clone troopers that were reminiscent of those seen in Episodes II and III, but we quickly began looking at hybrid troopers who combine visual elements from both prequel and classic trilogy troopers.

To achieve the gameplay variety, we included virtually all known stormtrooper variants—including scout troopers—and then began creating our own brand new variations such as EVO (Environmental) Troopers capable of surviving on hostile worlds, jet pack wearing Jump Troopers, Incinerator Troopers wielding deadly plasma weapons, and the Shadow Troopers, who have been issued personal cloaking devices. As development continued, a variation of the dreaded Dark Trooper came online, which fulfilled a need for a brute-sized Imperial who could not only sustain large amounts of damage, but dish it out as well. In addition to stormtroopers and their many variants, The Force Unleashed also contains a few extra enemy types that will be recognizable from the movies, such as Death Star Gunners.

"The Dark Troopers are half-human, almost robotic, and giant—much larger than normal stormtroopers. There's still a little human left; there are still organic parts in them."

—concept artist
Stephen Chang

JUMP TROOPER MODEL
Yoon Kim

OZZIK STURM CONCEPTS
Amy Beth Christenson

Ozzik Sturm

The *Star Wars* galaxy is populated by thousands of Imperial officers of many different ranks. *A New Hope* featured the cold and calculating Grand Moff Tarkin, and the very brash Admiral Motti; *The Empire Strikes Back* introduced clumsy Admiral Ozzel and the competent and determined General Veers. To bring an Imperial face to the occupation of Kashyyyk, the team created a new Imperial officer, Captain Ozzik Sturm. Even from the earliest descriptions, Sturm was described as a cold-hearted Imperial without remorse or compassion for "lesser life-forms."

Outside of being an officer, Sturm is an avid big-game hunter, which is what makes him an ideal candidate for the assignment on the Wookiee homeworld. Throughout his compound on Kashyyyk, he has several trophies on display meant to celebrate his many conquests and to serve as a reminder to everyone that he is a ruthless killer. He even has a customized AT-ST equipped with a long-range sniper cannon for hunting excursions.

Sturm's was first costumed in a traditional Imperial officer uniform, but we wanted to add elements that suggested his depravity and love of hunting sentient life. Initial explorations had him wearing animal skins, leather or furred boots, and other trophies. Ultimately, we decided to include just one of these touches: a furry sash that, if one looks closely, is clearly made from a Wookiee hide..

"We wanted a boss who was an Imperial officer. At one point we thought he'd be a weird monster or shape-shifter so I did these [in the vein of] *Phantom of the Opera* and *Predator* [above]. We ended up making Ozzik a crazed hunter."

—concept artist Amy Beth Christenson

Environments
Chapter Four

PREVIOUS PAGE:
EASHPYYR LANDING
Stephen Chang

FELUCIA RIVER
Chris Vey

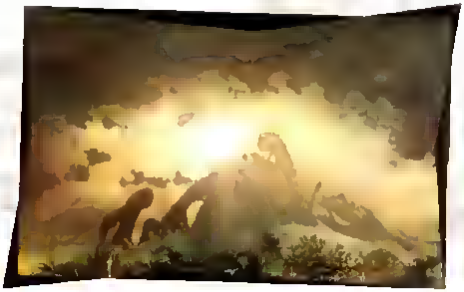
IMPERIAL SARLACC CONSTRAINT DEVICE
Amy Beth Christenson

Alien and Beautiful

From the very beginning, the *Star Wars* films have been renowned for their memorable characters and rich stories. Just as important are the incredible and varied worlds George Lucas created to serve as backdrops to the action. From the icy wastelands of Hoth to the deserts of Tatooine and the lush forests of Endor, each planet in the *Star Wars* saga is instantly recognizable. In many ways, these worlds are characters unto themselves.

Selecting and developing the locations for The Force Unleashed was an intense and lengthy process. We started with a handful of considerations:

- We wanted a good mix of new and familiar locations and to include places from both trilogies.
- Each location had to be recognizable as a *Star Wars* world or site.
- We were keenly interested in showing the rise of the Empire and the evolution of the galaxy during the dark times between Episodes III and IV, so many of the locations needed to support an Imperial presence.
- From an art standpoint, each local on needed to look and feel different.
- Perhaps most important, each location needed to be a compelling Force playground for our core gameplay. We gravitated toward worlds with lots of destructible objects and naturally recurring dangers, such as cliffs, toxic rivers, or jets of carbonite gas.



FELUCIA MATTE PAINTING, EPISODE III
ILM Digi-Matte Department

Kashyyyk

The Wookiee homeworld of Kashyyyk has long lived in the minds of *Star Wars* aficionados since its appearance in the 1978 made-for-television *Star Wars Holiday Special*. The planet was fully realized as a lush, green forest world in *Revenge of the Sith*.

Kashyyyk was one of the first locations selected for the game. We were attracted to the world because it offered a natural setting, which we knew would could evolve over time. As the story progresses, Kashyyyk transforms from the verdant world featured in Episode III to a charred and devastated planet under complete Imperial control. Kashyyyk also provided the benefit of a very familiar, well-established native species—Wookiees. Finally, Kashyyyk presented a number of technical and artistic challenges that we were excited to tackle, such as creating realistic foliage and Wookiee fur.

Over time, Kashyyyk became one of the most important locations in the game. It has the distinct honor and challenge of being the opening location—a world that has to captivate players from the first second. In this prologue level, the player is placed in the role of Darth Vader, whose dark and violent character is a sharp contrast to the colorful world. Overall, Kashyyyk was an excellent starting point to show off what could be achieved graphically with our internally developed game engine.

KASHYYYK MATTE PAINTING
Chia Ko

WOOKIEE VILLAGE
Craig Kinght

VADER ON KASHYYYK
Amy Beth Christenson

IMPERIAL HUNTING GROUNDS ON KASHYYYK
Stephen Chung

Executor: Darth Vader's Inner Sanctum

For story purposes, the team had to decide where Darth Vader would "live," his home base as the Apprentice travels the galaxy to do his bidding. We finally chose as Darth Vader's Inner Sanctum the Super Star Destroyer *Executor*, which is actually under construction during the events in The Force Unleashed.

The look of the Inner Sanctum was inspired by Star Destroyers from the movies, including the *Executor* seen in *The Empire Strikes Back*, and production stills of the Death Star from *A New Hope* and *Return of the Jedi*. Everything has a sterile, imperial look about it, which reflects Vader's cold-hearted disposition.

"This is the first time you see Vader and become his apprentice. I wanted to evoke a really strange feeling between these two. This place is supposed to be hidden so you can't even see outside. No one knows about this place."

—Concept artist Chin Ko

VADER KNIGHTING THE APPRENTICE
Chin Ko

EARLY TRACTOR BEAM CONCEPT ART
Chris Voy

NAR SHADDAA
Chris Ko

BATTLE WITH KOTA
Chris Voy

TIE Fighter Construction Facility

The first level in which the player controls the Apprentice is the TIE Fighter Construction Facility. The installation is a satellite structure that orbits the pirate moon, Nar Shaddaa, and was constructed to manufacture Twin Ion Engine (TIE) fighter attack ships. Vader feels the time is right to begin testing his Apprentice and sends him on his inaugural mission to hunt down a Jedi. The target: Master Rahm Kota. From a story perspective, the grizzled Jedi general is actually trying to lure Darth Vader out of hiding by attacking imperial targets.

When thinking about the facility as a gameplay space, we decided that this would be a great opening area for the player to learn how to use his basic Force powers: Force grip and Force push. The space needed to be dynamic, big, and set the tone for the rest of the game. Throughout the level, designers implemented many destructible set-pieces, such as catwalks that can be ripped apart and destroyed, and we populated each area with plenty of enemies and objects that can be used as projectiles. It has also proved to be an excellent showcase for Digital Molecular Matter, a technology that enables the player to bend metal and blow open thick Imperial doors using the Force.

The look of the location is, of course, very Imperial. The opening hangar as well as all subsequent hallways and gameplay spaces were derived from and inspired by areas from the films, especially *A New Hope*. Because there was such an abundance of reference material, most of the concept art for the level focused on areas meant to show how TIE fighters are constructed: the Wing Rack Room and cockpit assembly line, for example. The final gameplay space—a large command center where the Apprentice finally confronts Master Kota—also went through numerous revisions, including dramatic shifts in the color palette to complement Kota's green lightsaber and emerald Force effects.

Building Environments: From Idea to Render and Back Again

Production Diary #3

March 22, 2007

Building the levels in The Force Unleashed was a constant dance between concept and creation when in full production. Artists were building them, action was being blocked out within them, and you could inhabit them as playable environments. Others levels though, like Kashyyyk, were in a much earlier state of preproduction, where we were still trying to solve the challenges of rendering the trees and what exactly happens there.

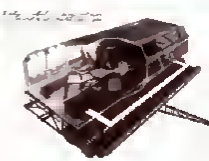
In the movies, sequences like the droid factory of Episode II and the Order 66 sequence in Episode III came about in a very similar way. Both were designed and executed well after principal photography had wrapped, when the movies were deep in postproduction mode. Yet each was built from scratch with concept art and animatics while other parts of the movie were already being layered with finished visual effects.

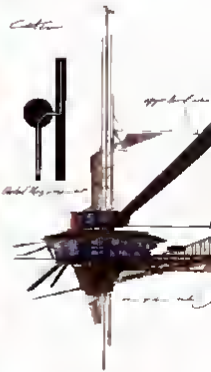
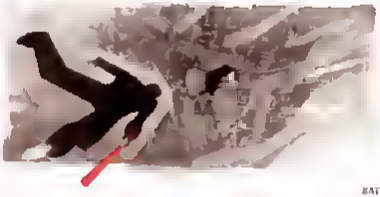
Part of the challenge was that until the end of 2006, we were still determining the metrics of our new gaming environment, still getting a handle on how many polygons, lights, characters, and AI a next-generation environment could support. Even something as simple as jumping from six characters to ten dramatically changes the dynamics of the scene, and can require some new brainstorming to help shape the scene's role in the story.

Such shifting ground made it necessary for the entire team to remain agile. The concept artists definitely felt it, as they were constantly receiving new requests for art and designs as the developers came up with new ideas based on our new requirements.

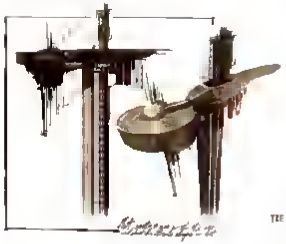
—Brett Rector

TIE FIGHTER CONSTRUCTION FACILITY
Chris Voy



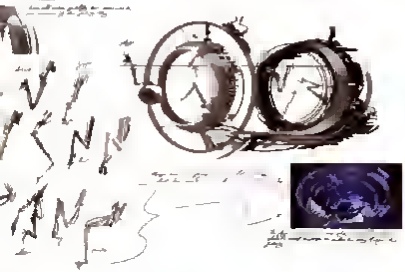



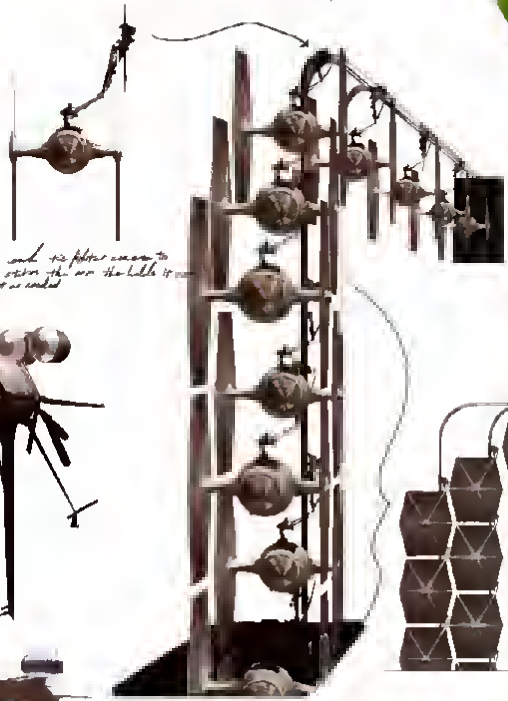
BATTLING KOTA
Amy Beth Christenson

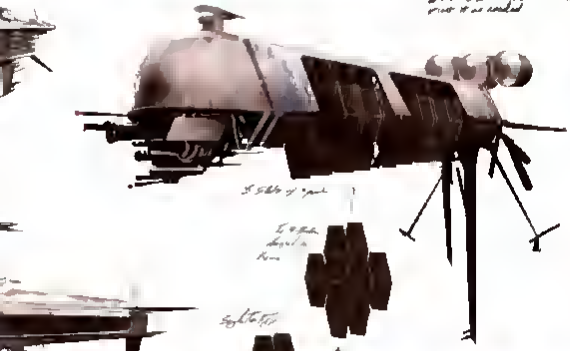


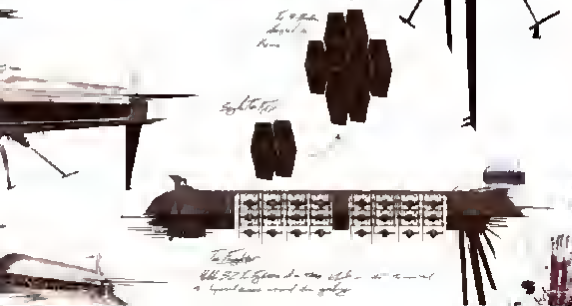
TIE FIGHTER CONTRUCTION FACILITY PROPS
Chris Voy

The Bunk









Raxus Prime

When the team first began thinking about locations to create for The Force Unleashed, Raxus Prime—a planet that first appeared in 2002 in LucasArts's Clone Wars game—was nominated almost immediately. Raxus serves as the galaxy's garbage dump. Every square inch is covered with twisted and rotting metal, discarded starships, broken droids, and other galactic detritus. Beneath the layers of trash are dangerous catacombs filled with toxic fluid. And while Raxus Prime is generally considered uninhabitable, it is populated by Jawas and various criminals, scavengers, and space pirates.

Since its inception, Raxus Prime has been viewed as a perfect Force playground. The planet is littered with ammunition in the form of exploding barrels, turbines, and other objects that the player can hurl at enemies. The toxic sludge is an excellent recurring trap, and avalanches of junk can be used to surprise the player.

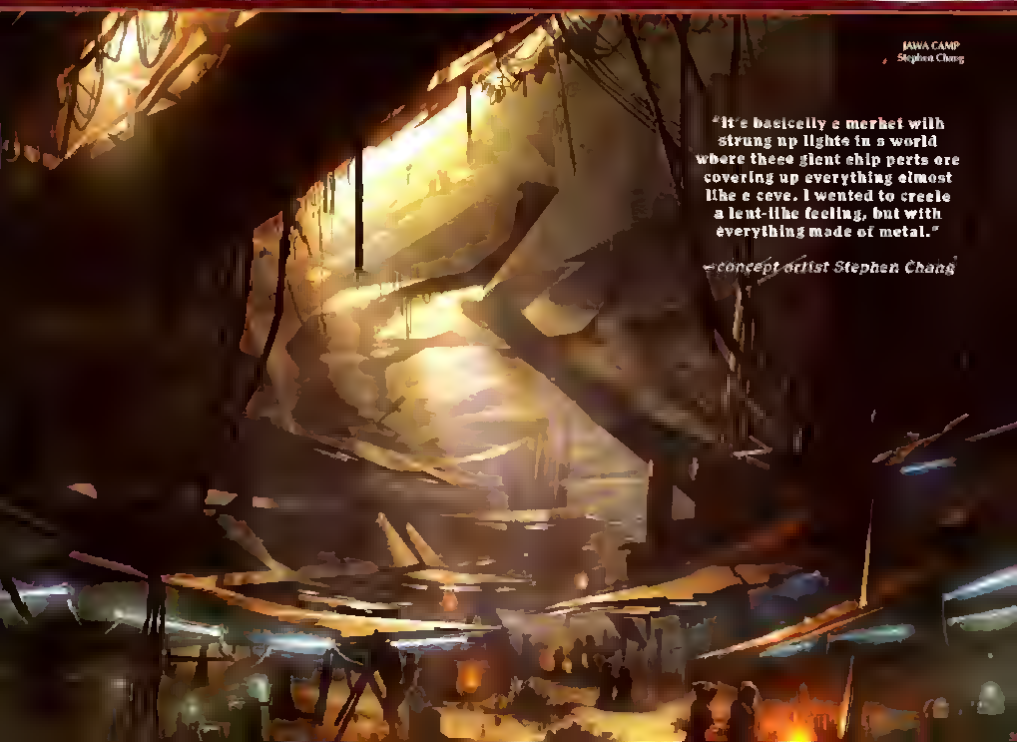
Although Raxus Prime had appeared in the Clone Wars game and in other sources, defining how the planet would appear in The Force Unleashed proved a massive challenge. Art Director Matt Omernick wanted to capture the feel of a haphazard and hazardous junk planet, but realized that the planet couldn't appear too confusing or overwhelming. "Eventually, we focused on using giant junk elements—a huge engine block or the hull of a starship—to help define the environment. To capture the sense that Raxus Prime has been used as a junkyard for centuries, it has its own geological record—canyon walls show crushed strata of junk, with recognizable ship parts and other debris from eons past."

Raxus Prime's true personality didn't emerge until the team theorized that the local Jedi-in-hiding, Kazdan Paratus, had gone insane over his long years in seclusion. His dementia manifests in his belief that his artificial constructs are, in fact, members of the Jedi Council. This delusion resulted in a host of new imagery: a re-creation of the Jedi Temple built out of junk and a haunting Jedi Council Chamber with replicas of Yoda and other Jedi Masters.

ORE CANNON ON RAXUS PRIME
Chris Voy

JUNK JETH TEMPLE MATTE PAINTING
Chris Vay

BAXUS PRIME FROPS
Chris Ivey



JAWA CAMP
Stephen Chang

"It's basically a market with strung up lights in a world where these giant ship parts are covering up everything almost like a cave. I wanted to create a tent-like feeling, but with everything made of metal."

—concept artist Stephen Chang

SCAVENGER CAMP
Chris Vay

KAZIDAN'S JUNKTITAN
Stephen Chang

FOOT PRINT

UNUSED SPIDER DROID CONCEPT
Stephen Chang

SENTIENT COMPUTERS ON BADUS PRIME
Stephen Chang

UNMASKED DROID WALKER CONCEPT
Stephen Chang

FINAL DROP BASE ON RAXUS PRIME
Chris Vey

Felucia

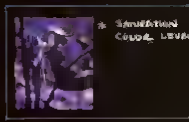
Unlike the TIE Fighter Construction Facility and Raxus Prime, which are filled with metal and other synthetic materials, Felucia is a colorful fungus world covered by rubbery plants and other organic structures. We got a brief glimpse of Felucia in *Revenge of the Sith*, but we felt that it was a visually stunning planet and would provide an engaging gameplay space.

In Act I Felucia stands in starky contrast to the other locations. Members of the team often refer to Felucia as the "mood ring" planet because it is very much a breathing world that reacts to what is happening on its surface. Early in the game, when the Living Force is strong and the dark side is being held at bay by Shaak Ti, the planet is beautiful, bright, and multihued. After Shaak Ti's death, the dark side corrupts the planet and its inhabitants; the planet then shows signs of rot and decay.

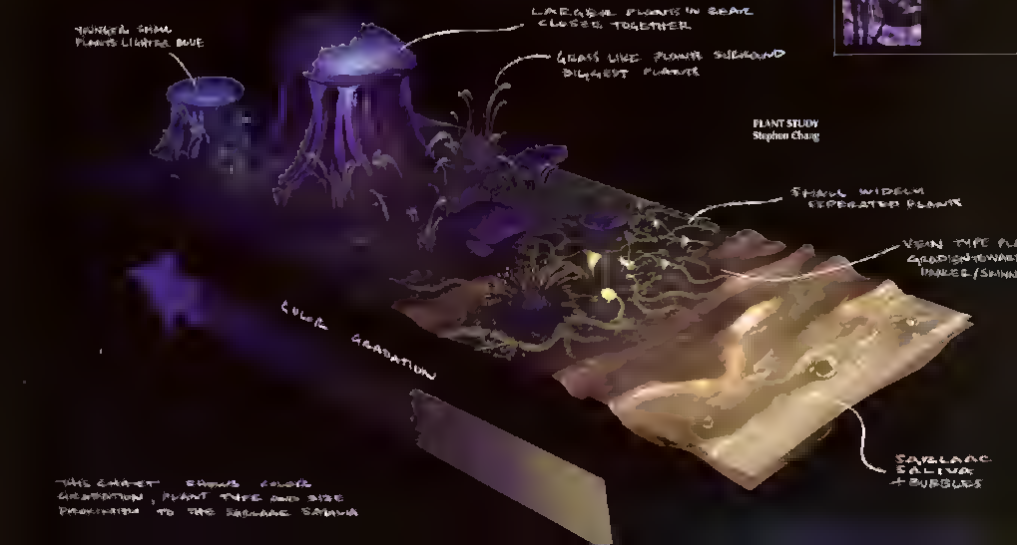
In both versions of Felucia, a major centerpiece is the mega Sarlacc—a Sarlacc so huge that it covers a large portion of the planet. Several areas of Felucia were designed to show signs of the Sarlacc: Once near the monster's mouth, the landscape is dotted with massive teeth and bubbling sores that spew harmful acid.

FELUCIA (WITH EARLY ROGUE SHADOW CONCEPT)
Stephen Chung

FELUCIA PLANT GRADATION

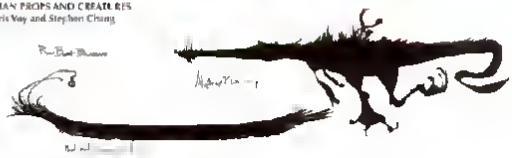


* SATURATION/ COLOR LEVE



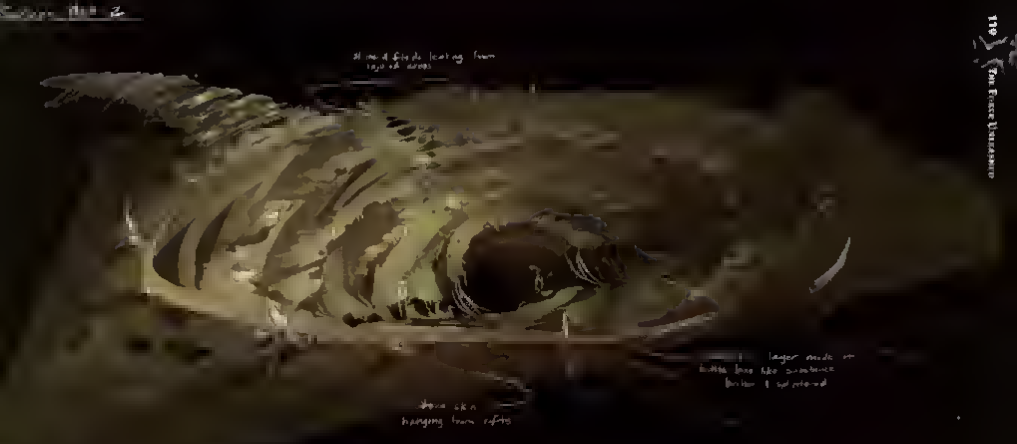
THIS CHART SHOWS COLOR GRADATION, PLANT TYPE AND SIZE PROXIMITY TO THE SAVLAAC SALIVA

FELUCIAN PROPS AND CREATURES
Chris Voy and Stephen Chung



FIGHTING SHAAK TI ON THE MEGA-SARLACC
Amy Beth Christenson

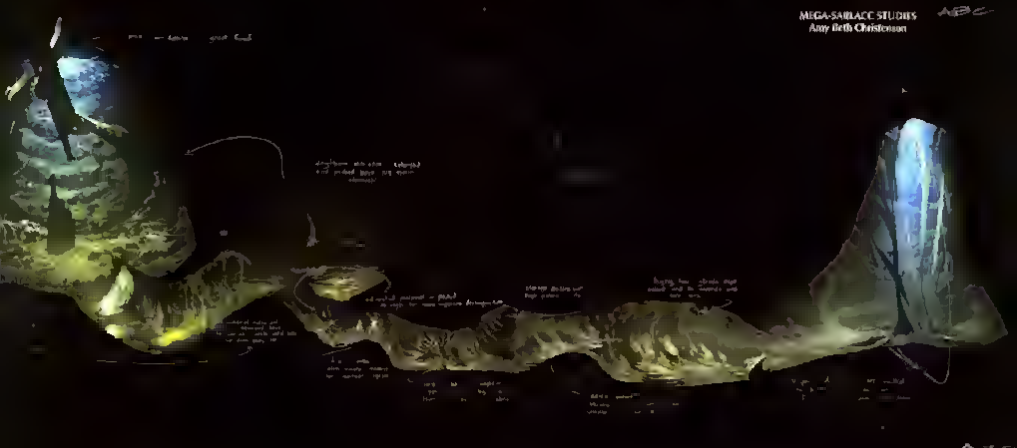
FIGHTING THE FULL RANCOR IN THE RANCOR GRAVEYARD
Amy Beth Christenson



"It's supposed to be like a tar pit, except it's Sarlacc stomach acid that you're fighting on. I made it a bit of a graveyard, too. A rancor got stuck there and its skeleton is still getting dissolved. I just wanted to make it this really creepy place, very dead looking because the stomach acid's bubbling everywhere and hitting everything off."

–concept artist Amy Beth Christenson

MEGA-SARLACC STUDIES
Amy Beth Christenson



Cloud City

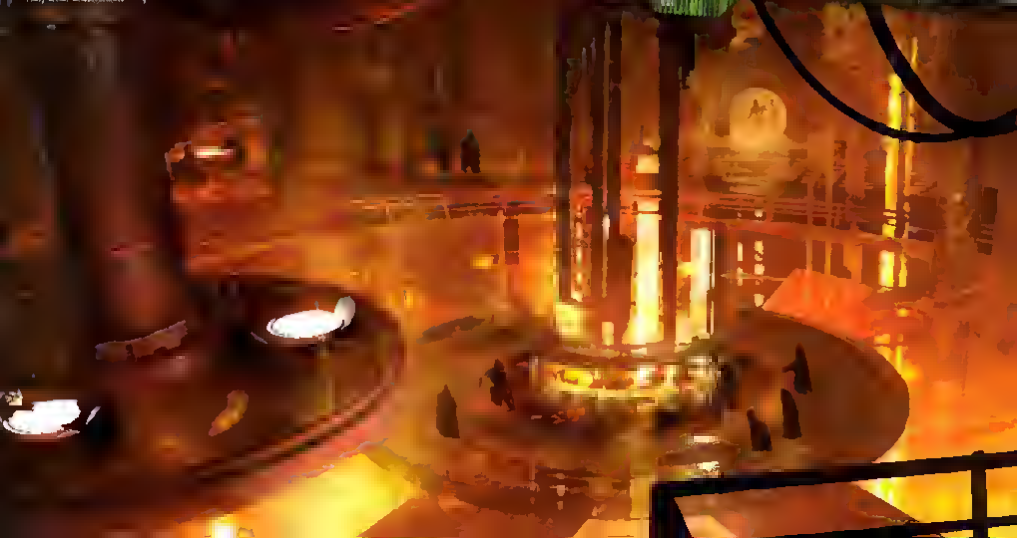
Cloud City disappeared and reappeared during development more than any other location. Initially, it was meant to be a pirate stronghold ruled by Maris Brood, when Maris became Shaak Ti's apprentice, Cloud City vanished from the location list. But we were constantly trying to find ways to resurrect the familiar location, and it was suggested as the possible home for several other Jedi, or an Imperial garrison or even the birthplace of the Rebellion—before it finally became the site where the Apprentice finds a blind, drunk, and disheveled General Kota.

To ensure that Cloud City felt familiar but new, we portrayed it as under construction, on its way to becoming the metropolis seen in *The Empire Strikes Back*. The gameplay space includes an Ugnaught bar and a variety of construction platforms. The look of Cloud City was derived from early *Empire Strikes Back* concepts done by artist Ralph McQuarrie.

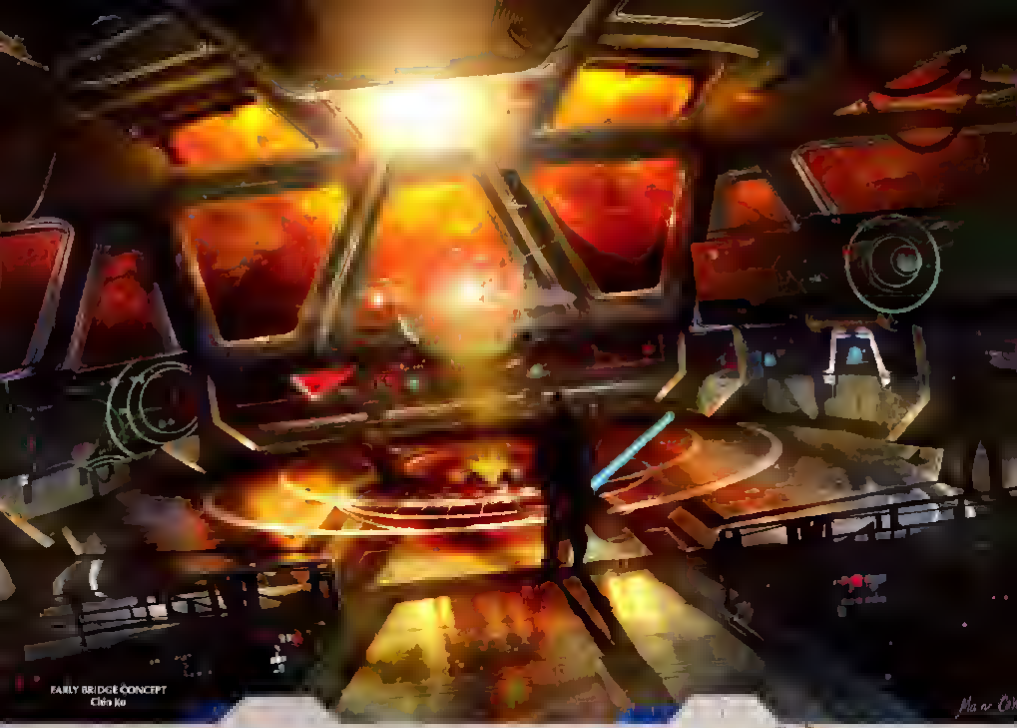
MODIFIED CLOUD C
Amy Beth Christenso

CLOUD CITY PLATFORM
Amy Beth Christenson

FINDING KOTA IN THE VAPOR ROOM
Amy Beth Christenson

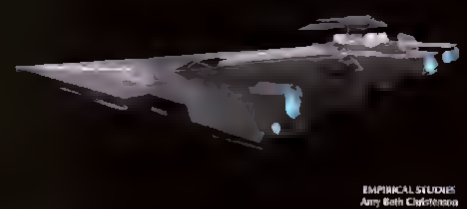


THE VAPOR ROOM INTERIOR
Amy Beth Christenson



EARLY BRIDGE CONCEPT
Cléo Ko

EMPYREAL
Amy Beth Christenson

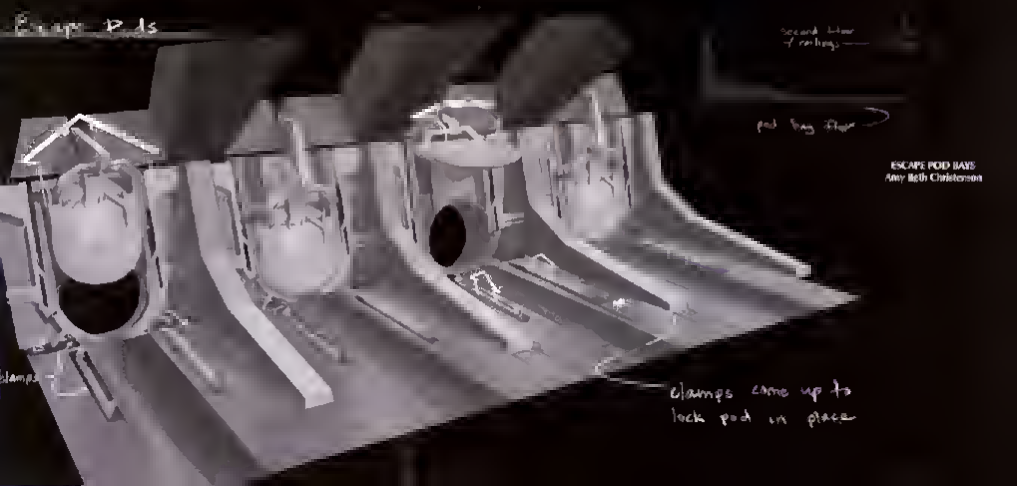


EMPIRICAL STUDIES
Amy Beth Christenson

The Empirical

In a break from planetary locations, the *Empirical* is the only game level that takes place aboard a starship. Like the TIE Fighter Construction Facility, the Empirical is another area inspired by Imperial facilities seen in the films. The opening room, dubbed Vader's Laboratory, is very reminiscent of the lab seen in *Revenge of the Sith*, and the overall tone of the location is meant to create a sense of dread and foreboding. The hallway spaces and rooms have a sterile, military feel.

Even though the Empirical is a relatively small gameplay space, it serves as a big turning point in the game's story. It is here that the Apprentice learns that he is to form the Rebel Alliance. It is also where the relationship between the Apprentice and Juno Eclipse becomes more solidified. Part of Vader's instructions for the Apprentice at the beginning of Act II are to spare no lives aboard the ship. However, the Apprentice consciously disobeys these orders and rescues Juno from a stasis field before escaping the ship.



ESCAPE POD BAYS
Amy Beth Christenson

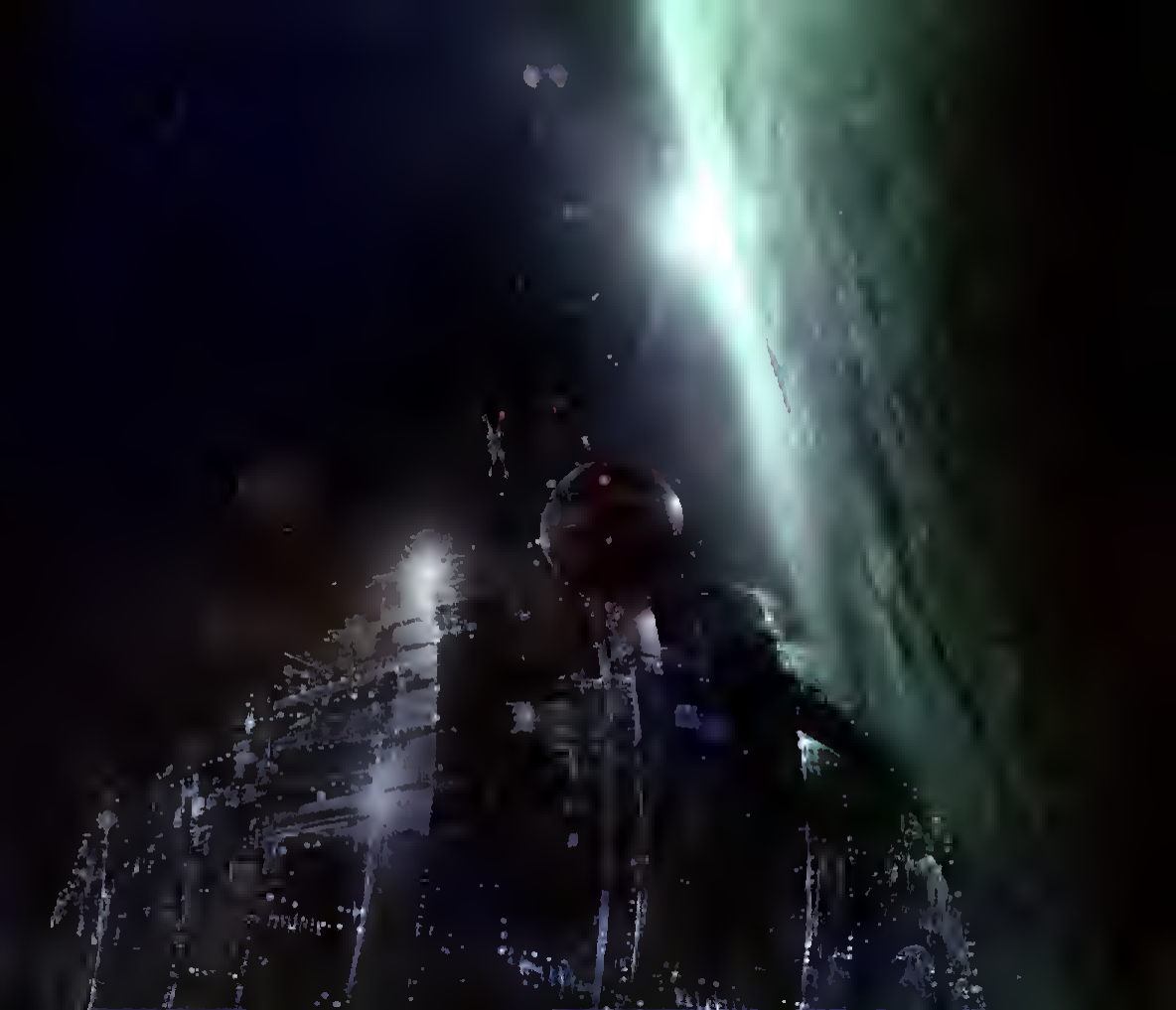
DESTRUCTION ABOARD THE EMPIRICAL
Amy Beth Christenson

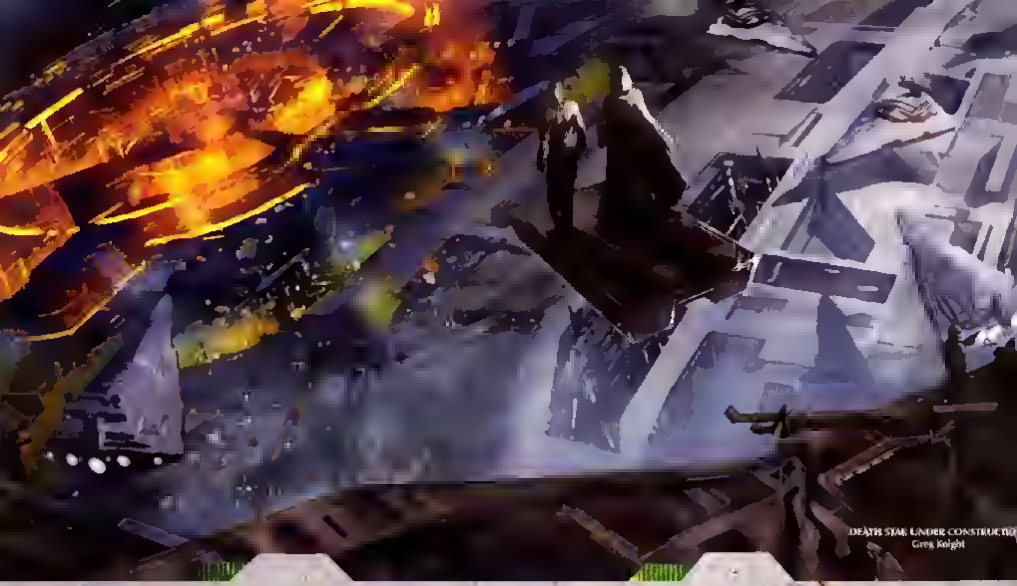
The Death Star

Viewed as the ultimate weapon in the galaxy, the Death Star is nearly as iconic as Darth Vader and the lightsaber. In The Force Unleashed, the team was given the honor of being able to explore the Death Star's inner workings and provide a glimpse of the massive space station under construction prior to the events of *A New Hope*. The Death Star's overall art direction, of course, has been established for more than thirty years, but the team did need to conceptualize several new areas—including a laser convergence room and the Emperor's observation dome, where the Apprentice's final clash with Vader and the Emperor takes place. Even more important, we were allowed to develop the fiction behind how the Death Star actually generates the massive laser that destroys entire planets.

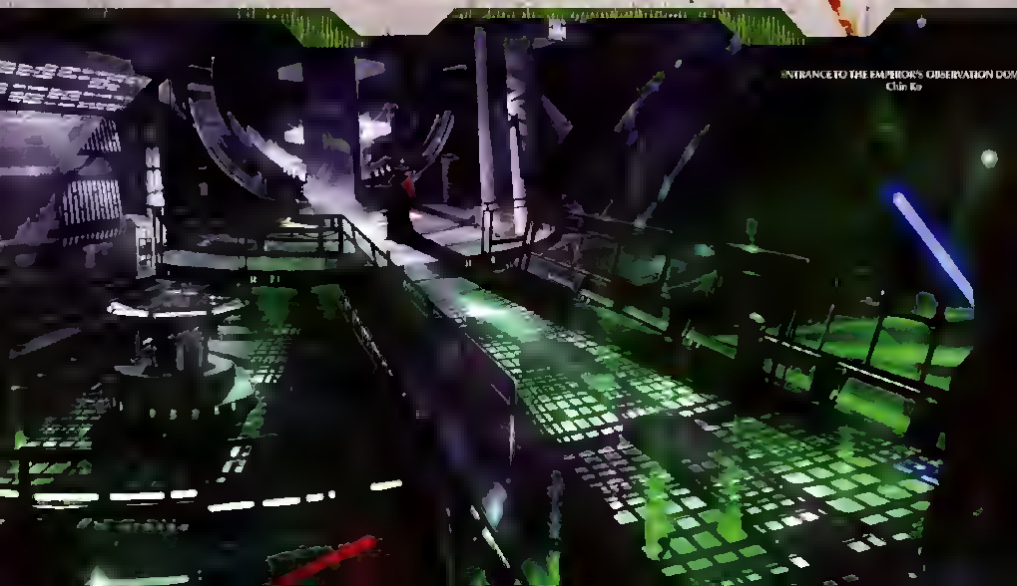
From the earliest suggestions to use the Death Star as an in-game level, Blackman stressed that a major gameplay feature should be the space station's massive green laser. The core gameplay in this environment would be tossing Imperials into the laser, which was often compared to a subway train. Therefore, one of the first environments created for the Death Star early in production was the firing tube. The team wanted to get sense of how the laser would fire, and by viewing various scenes from *A New Hope* and analyzing production stills we were able to extrapolate the tube's initial look. As we dove further into the space station's inner workings, we decided that the Death Star uses focusing crystals to intensify the beam's power. The laser is further empowered by passing through a set of spinning rings in the "Pulserium" section of the Death Star. Ultimately, multiple beams pass through a convergence room, where they all merge into one of eight lasers fired from the edge of the Death Star's dish; these eight lasers then form the planet destroying beam, as seen in the films.

EARLY DEATH STAR I CONCEPT
Chia Ke





DEATH STAR UNDER CONSTRUCTION
Greg Knight



ENTRANCE TO THE EMPEROR'S OBSERVATION DOM
Chin Ko

TRENCH RUN
Amy Beth Christenson

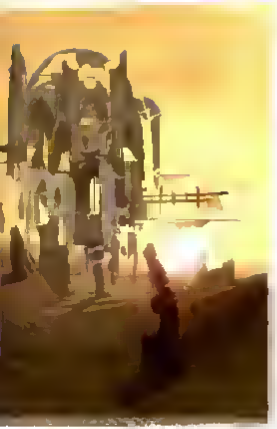
DEATH STAR STUDIES
Stephen Chang

DEATH STAR SUBWAY HALL BATTLE
Chin Ko

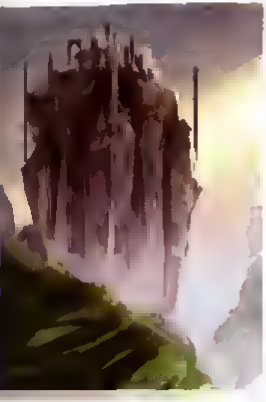
SCENE 100

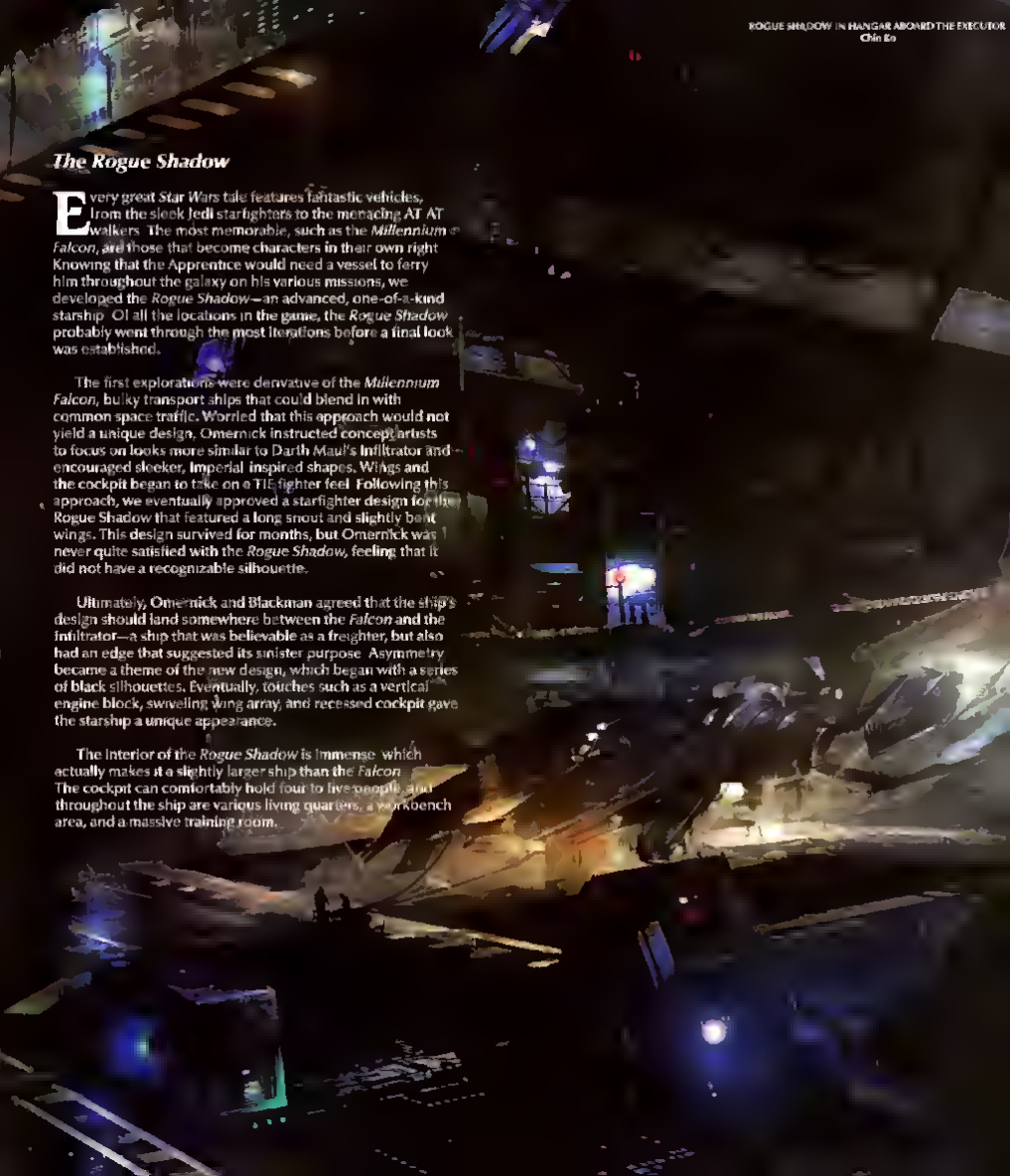
Corellia

When it is time to form officially the Rebel Alliance, the Rebellion's potential leaders gather in a central location. In a nod to existing canon, which establishes that the Alliance was formed with the signing of the "Corellian Treaty," we set this fateful meeting on Corellia. In order to create the sense that the Alliance leaders are meeting in secret, this pivotal scene takes place atop a snowy plateau amid the ruins of an ancient watchtower.



CORELLIAN RUINS EXPLORATIONS
Amy Beth Christenson





ROGUE SHADOW IN HANGAR ABOARD THE EXECUTOR
Chin Ko

The Rogue Shadow

Every great *Star Wars* tale features fantastic vehicles, from the sleek Jedi starfighters to the menacing AT-AT walkers. The most memorable, such as the *Millennium Falcon*, are those that become characters in their own right. Knowing that the Apprentice would need a vessel to ferry him throughout the galaxy on his various missions, we developed the *Rogue Shadow*—an advanced, one-of-a-kind starship. Of all the locations in the game, the *Rogue Shadow* probably went through the most iterations before a final look was established.

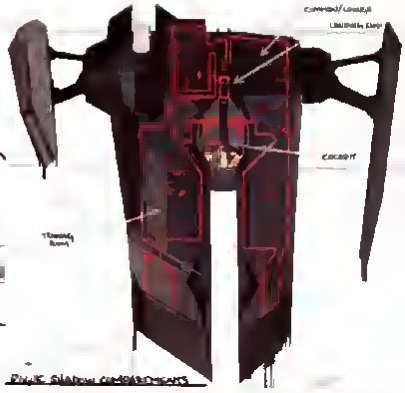
The first explorations were derivative of the *Millennium Falcon*, bulky transport ships that could blend in with common space traffic. Worried that this approach would not yield a unique design, Omernick instructed concept artists to focus on looks more similar to Darth Maul's Infiltrator and encouraged sleeker, Imperial-inspired shapes. Wings and the cockpit began to take on a TIE fighter feel. Following this approach, we eventually approved a starfighter design for the Rogue Shadow that featured a long snout and slightly bent wings. This design survived for months, but Omernick was never quite satisfied with the *Rogue Shadow*, feeling that it did not have a recognizable silhouette.

Ultimately, Omernick and Blackman agreed that the ship's design should land somewhere between the *Falcon* and the Infiltrator—a ship that was believable as a freighter, but also had an edge that suggested its sinister purpose. Asymmetry became a theme of the new design, which began with a series of black silhouettes. Eventually, touches such as a vertical engine block, swiveling wing array, and recessed cockpit gave the starship a unique appearance.

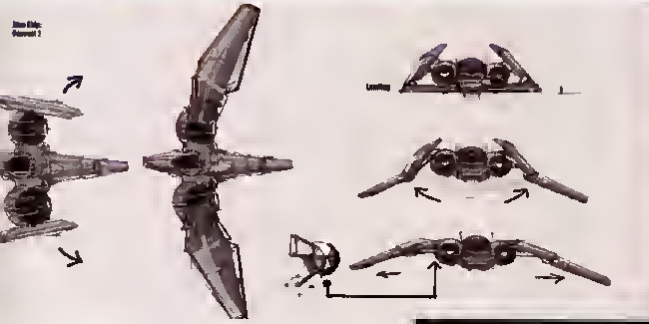
The interior of the *Rogue Shadow* is immense, which actually makes it a slightly larger ship than the *Falcon*. The cockpit can comfortably hold four to five people, and throughout the ship are various living quarters, a workbench area, and a massive training room.

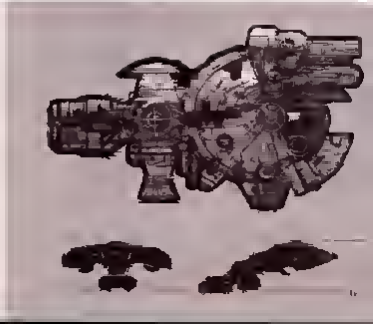
Rogue Shadow Ramp

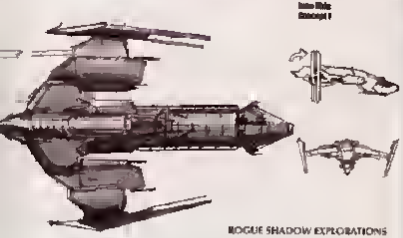
ROGUE SHADOW RAMP
Chin Ke



ROGUE SHADOW SCHEMATIC
Stephen Chang







ROGUE SHADOW EXPLORATIONS
Chin Ke

Size

ORIGINAL ROGUE SHADOW
Chin Ke

"We were trying to echo a gritty New York City with lots of hums noir lighting, like a red-light district that would reflect a bounty hunter view of Coruscant underneath the main streets."

—concept artist Greg Knight

CORUSCANT LOWER LEVELS
Greg Knight

JEDI COUNCIL CHAMBER
Molly Denmark

Early Explorations: Coruscant

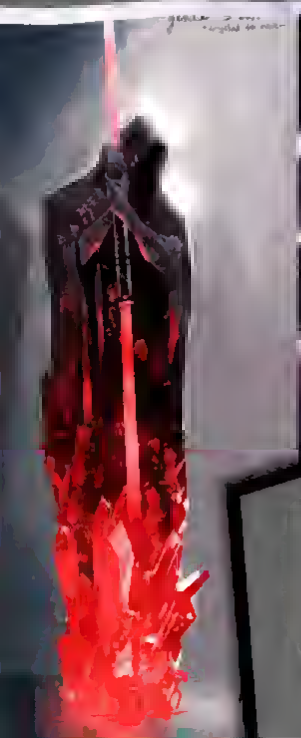
In one early version of the story, the Apprentice was ordered to visit the ruins of the Jedi Temple on Coruscant, where he could seek greater knowledge. This was to be tied to a game mechanic—every time the Apprentice visited the temple, he would unlock a new, more devastating power. We also planned to have him interact with the spirits of dead Jedi, including Mace Windu. As the game design for the Xbox 360 and PlayStation 3 versions changed, we opted to unlock powers between levels, giving the player an instant reward, and the Jedi Temple convention became obsolete. However, the location was preserved for the PlayStation2, PlayStation Portable and Wii. In these versions, the Apprentice endures "Jedi Trials"—combat against metaphysical threats, including two new Sith enemies.

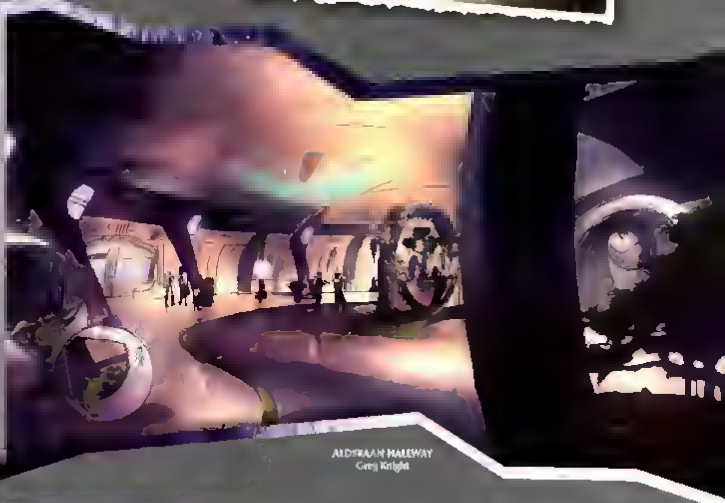
SITH STATUE
Amy Beth Christenson

BANTHA GRAVEYARD ON TATOOINE
Amy Beth Christenson

Early Explorations: Tatooine

Perhaps the most recognizable *Star Wars* planet, Tatooine was included in early drafts of the story because of its prominence in the saga. At one point, we suggested that the spirit of Qui-Gon Jinn might direct the Apprentice to Obi-Wan Kenobi, who is in hiding on the desert world. To find Obi-Wan, the player would have braved a Tusken burial mound, a Jawa fortress, and the Mos Eisley cantina. When George Lucas encouraged us to create a new Jedi Mentor, we abandoned the use of Obi-Wan and Tatooine.





ALDERAAN HALLWAY
Greg Knight

Early Explorations: Alderaan

When the story introduced Princess Leia as a child, Alderaan was a major location in the game. The Apprentice's mission—to find and defeat Shaak Ti—would have taken him into the heart of the Alderaan Royal Palace, which was to include a massive natural history museum.

Early Explorations: Haroon

The last planet to land on the chopping block Haroon was a new world created by the development team It was described as a "green crystal world " where the Empire was mining materials necessary to create the giant focusing lenses used on the Death Star The Apprentice s mission here involved rescuing the alien Ackbar who had been sentenced to a lifetime of hard labor in the Haroon mines This portion of the storyline did not f t well with the continuity—Ackbar's recruitment into the Alliance had already been established in other material—and we ultimately decided to remove the Haroon world in order to include iconic Cloud City

DEATH STAR FIRING ON HARDOR.
Greg Knight

Technology

Chapter Five

"What was the most challenging was developing technology from scratch, with a new team of engineers, on new platforms like the Xbox 360 and PlayStation 3, with new technology. One of those is enough of a challenge for a project, let alone managing to make all of this gel together."

—lead engineer Cedrick Collomb

PREVIOUS PAGE:
DEATH STAR LASER TUBE
Chin Ko

SCREEN CAPTURES FROM THE ORIGINAL PRE-VIS
Force Unleashed Pre-Production Team

UNUSED RAXUS TROOPERS ON RAXUS PRIME
Yoos Kim & Carl Wattenberg

Design Synergies

George Lucas has always been an innovator, pioneering new techniques and technologies in audio at Skywalker Sound, visual effects at Industrial Light & Magic (ILM), and in his efforts to advance the cause of digital filmmaking. For many years, LucasArts was located just a few miles from ILM and Skywalker Sound, yet the three organizations did not collaborate until 2002's *Star Wars Bounty Hunter*. Even with this release, the bilateral work was limited to in-game cinematics rather than a true sharing of technical expertise.

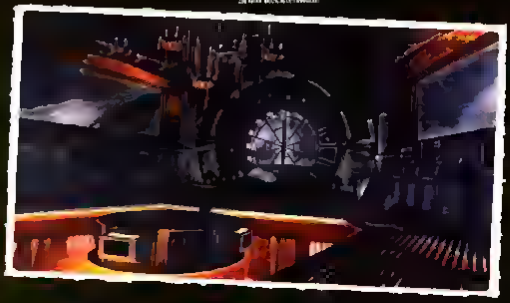
In 2003, the germination of a full collaboration between LucasArts and ILM began to take shape in the most innocuous way: during a chance visit by LucasArts engineers to an ILM Research and Development annual open-house event.

The open house was very much like a visual effects science fair. Invitations were distributed throughout the Lucasfilm companies, but only a handful of LucasArts employees attended the events. Among them was senior engineer Nick Porcino, who took great interest in one of the projects on display, ILM's proprietary toolset, known as Zeno. Based on what he saw at the open house, Porcino felt that Zeno could be leveraged for use at LucasArts as a foundation for the tools necessary to build cutting-edge next-generation video games. In late 2003, Porcino and ILM's director of research and development Steve Sullivan were discussing technologies that LucasArts and ILM could share when the idea came up of building an integrated "virtual studio" (which ultimately led to the plan to create the Virtual Studio for Lucasfilm). Essentially, LucasArts and ILM would integrate their individual tools into one multi-functional tool pipeline, a powerful development environment that other companies would not be able to replicate without years of cross-disciplinary development.

The resulting proposal was presented to Lucasfilm executives, but full collaboration would need to wait until Zeno could be integrated into the ILM pipeline. By late 2004 however, LucasArts and ILM engineers were actively consulting with one another, creating the foundations for LucasArts' new game development pipeline. In 2005, ILM and LucasArts relocated to Letterman Digital Arts Center in San Francisco's Presidio, at this point, the collaboration became much more focused and intense, with ILM and LucasArts engineers sharing knowledge, techniques, and even office space in order to create a graphics renderer that could be shared across both companies and a game editor (known as "Zed," short for "Zeno Editor").

The first game to take advantage of this tools collaboration would be *Star Wars: The Force Unleashed*.

DEATH STAR SCREENSHOTS
Sean Beckerwald



History of Zeno

The origins of Zeno date back to the mid-1990s, when the foundation for a "virtual studio" was conceived out of necessity. Prior to Zeno, most of ILM's core technology was built around a program called Softimage|3D. However, working with a third-party technology had limitations. For example, the ILM engineers could not always change or update the program as they wished or modify components. To ensure a platform that could be continually upgraded, supported and, most important, modified to fit the needs of specific projects, ILM began work on Zeno which would be a new foundation for tool-building as well as proprietary technology that Lucasfilm would own outright.

The strength of Zeno as a tool is its modular design. Zeno is built to allow engineers to easily add features to existing tool components (or "modules"), or add entirely new modules, as required by a film or game. ILM began successfully using Zeno in a few isolated areas in 2000 and 2003 for rigid-body dynamics, matchmoves, and some animation. As the tool evolved, ILM decided to retire its old toolset and pipeline in 2004 and to create an entirely new framework that would incorporate Zeno, Maya, and Photoshop. The first movie to take advantage of the new pipeline was *War of the Worlds* (2005), it was also used in 2005 for Episode III: *Revenge of the Sith*.

For *Star Wars*: The Force Unleashed, LucasArts has worked closely with ILM to build its game editor, Zed. Because Zeno was constructed to be modular, LucasArts has been able to build upon the robust foundation and add components that can be used by the entire team.

The Ronin Renderer: Building the Next Gaming Engine

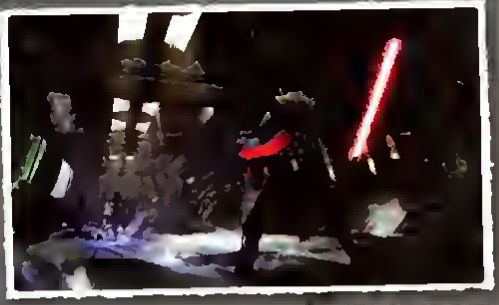
One of the most difficult tasks when developing *any* game is the creation of the core technology required to build and display the game's content. The trials we faced trying to solidify the vision for *The Force Unleashed* were quickly eclipsed by the myriad decisions required *after* the core concept received a greenlight. We had to determine what platforms on which to focus, the types of assets that would need to be created, the team size required to build the game, and thousands of other decisions. And every decision was effected by or dictated our technology plans.

Much of *The Force Unleashed*'s technology effort revolved around developing the core game engine, the foundation upon which the game is built. Loosely defined, a "game engine" brings together myriad systems—artificial intelligence, physics, user interface, gameplay, animation, audio, and many others—into one cohesive experience. The game's graphic renderer—the technology that allows the game to be displayed, and includes lighting and other features—is also a major component of the engine. Early in development, we dubbed the engine the "Ronin Engine."

Developing the Ronin Engine and its renderer would be extremely challenging. We needed to build an engine that could run on both the Xbox 360 and the PlayStation 3, and we had very little previous code to leverage, forcing us to build almost everything from scratch. In addition, we would be hiring the bulk of our engineers, creating a fresh team while trying to build new technology. Furthermore, the engine would need to integrate cutting-edge technologies such as Digital Molecular Matter and euphoria. Finally, we realized that players would expect incredible graphics and visual effects on the next-generation platforms, and hoped to drive a great deal of our graphics quality through excellent lighting work.

Given the extreme challenges presented by developing Net-new technology, we seriously considered other options. Our engineering leadership evaluated not only nearly every line of code ever written at LucasArts, but also numerous pieces of externally developed tech available for purchase. When the engineers had finally completed their assessment, we realized that the technology available outside of the company wouldn't accomplish everything we needed, nor would it allow us to collaborate as closely with Industrial Light & Magic. So, we decided to build the Ronin Engine in-house. Thus, in late 2004, we began working on the Ronin Engine in earnest, an effort spearheaded by senior engineers Tim Ramsay, Eric Johnston, Nick Porcino, and Nick Pavis. Ultimately, the final engine would be touched by literally dozens of engineers.

Because many engineers across two companies would need to work on the engine simultaneously, the engineering leadership focused on making the engine as modular as possible. This proved a fortuitous decision: the modular nature of the engine later allowed us to collaborate much more closely with our third-party technology partners, Pixelux and Natural Motion.



Euphoria (NaturalMotion Ltd.) / DMM (Pixelux Entertainment)

When the LucasArts' *Star Wars* team first pitched the idea for The Force Unleashed to George Lucas, we used a short video dubbed the "Pre-Vis." As we developed this pre-rendered sequence—which depicted a Jedi using the Force in several visceral, bone-jarring attacks on hapless stormtroopers—we focused on the interaction between characters and environment. When caught by the Jedi's telekinetic Force grip, the Pre-Vis stormtroopers tried to grab nearby objects and even each other. A Force push bent metal and shattered glass, and afflicted stormtroopers would cover their heads or try to roll with the impact.

Lucas approved our vision for the Force, so we wanted to ensure that all the details from the Pre-Vis found their way into the game. However, at the time of the Pre-Vis's creation, we had not yet developed technologies that would allow its blue-sky range of interactions. As part of our development effort, we therefore sought out technologies that would help us realize the initial vision. Enter NaturalMotion Ltd. and Pixelux Entertainment.

Euphoria

In late 2004, as the internal *Star Wars* and *Indiana Jones* games were entering early concept development, *Indiana Jones* Lead Engineer Nick Pavis began researching a company called NaturalMotion Ltd. Located in Oxford, England, NaturalMotion had developed a program called Endorphin, which enables visual effects companies to create "virtual stuntmen" using a process called motion synthesis. These digital doubles behave in realistic ways and can thus be substituted for shots that would normally be too dangerous or costly to attempt with real stuntmen. Based on advanced algorithms, Endorphin replicates human biomechanics, including a nervous system and musculature, to provide characters with reflexes, a plausible range of movement, and various other subtleties.

Pavis immediately recognized that a program like Endorphin could provide LucasArts with an alternative to the tried-and-true yet time-consuming art of hand-animating character movements. Endorphin's authentic motion synthesis algorithms could ensure that every hit reaction, every fall, and every stumble could look different every time. Rather than having to animate hundreds of reactions to every possible collision or impact, animators could focus on developing character performances, unique moves, facial animation, and storytelling. However, Endorphin was *not* a run-time application. It was developed for use in films, where a sequence that lasts only a few frames can take hours to render. Games need to render at 30 or 60 frames per second.

Fortunately, NaturalMotion was already working on a run-time version of Endorphin, later dubbed euphoria. Collaborating closely with senior engineer Steve Dykes and other LucasArts engineers, Pavis and NaturalMotion integrated an early version of euphoria into a run-time environment. The resulting technology is now in full use in The Force Unleashed, procedurally simulating and producing interactive animations. Another way to look at it is that NaturalMotion's technology provides characters with biomechanical artificial intelligence (A.I.) that infuses them with a central nervous system, including a brain, a spinal cord, and muscles.

At the core of euphoria are DMS Behaviors, which are A.I. motion controllers used to drive a character's muscles in response to sensory input. What should be noted is that the tech itself isn't designed to replace The Force

BATTLING THE FIGHTERS
Chris Way

Pre-Vis: Confirming the Vision

Production Diary #4

February 22, 2007

Through concept art explorations and numerous discussions, the team eventually fleshed out the notion of the "Force unleashed"—the Force amped up, over-the-top, and in some cases out of control. To solidify the vision of The Force Unleashed, project lead W. Haden Blackman and art director Matt Omernick met with FX artist Eric Antanavich and animator Patrick Przybyla to plan what was to become our pre-visualization for the game. The "pre-vis" was a one-minute video comprised of many "playblasts," or action sequences, that were "stitched" together to illustrate the ways in which the Force could be unleashed in-game—violently slamming stormtroopers into walls, shocking a group of troopers senseless, and tossing an enemy into an oncoming TIE fighter.

The pre-vis turned out to be a huge success—so much so that after LucasArts executives saw it they felt comfortable presenting it to George Lucas. George was very impressed by what he saw, creating one of the first defining moments for the project when he said "Go make that game."

—Brett Rector

Unleashed's existing animation system or gameplay A.I. Instead, NaturalMotion's technology works in tandem with LucasArts' game engine. The result is a fully simulated three-dimensional character that moves, acts, and thinks like the nervous system of a human being, creating a different payoff every time no matter how many times a player experiences a certain scenario.

For example, a simple Force push aimed at stormtroopers on a catwalk will cause them to try to regain their equilibrium; they will stumble about, flail their arms, and reach for security as the Force threatens to send them to their doom below. Some will save themselves, perhaps grabbing hold of a guardrail, some might grab at other troopers as they fall over the railing, others will protect their heads as they fall. Because the action is simulated through euphoria, and not handcrafted or scripted, the player will never be able to predict what will happen.

SCREEN CAPTURES FROM THE ORIGINAL PRE-VIS
Force Unleashed Pre-production Team

IN-GAME OMM SIMULATION OF BREAKING GLASS—*THE EMPIRICAL*

USING R2-D2 TO BREAK DMM WOOD PANEL IN FIRST PUBLIC DEMO

EARLY CONCEPT FOR TIE FIGHTER CONSTRUCTION FACILITY
Chris Voy

DMM

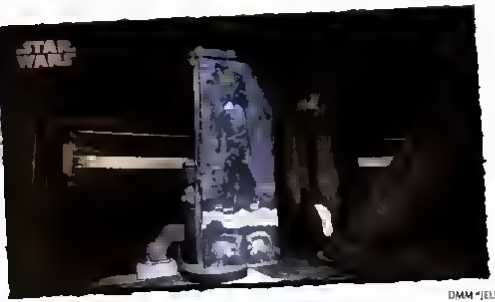
During the past few years, and certainly with the advent of high-powered game systems such as the XBox 360 and PlayStation 3, game developers have been creating increasingly more destructible, interactive, and authentic environments. Much like character animations, game structures, props, and materials are typically created over many hours by large teams of artists—modelers, and animators. If a game requires destructible objects, such as a window that shatters, a wall that crumbles, or a chair that breaks, artists must build a whole version of that object and then build multiple damaged versions of the object. In the game, the whole object is instantaneously replaced with one of the damaged versions at the moment of impact, creating the illusion that that object has been broken or destroyed. However, because of time constraints and memory limitations, only a few variations of any damaged object are created, ensuring that the player will see the same destruction over and over again. In addition, the "art swap" method for creating destructible objects is further limited by its inability to replicate the laws of physics. For example, if a character throws a ball through a window, that window generally breaks apart in the same way every time, regardless of the size of the ball, the force with which it is thrown, the angle of the impact, or the thickness of the glass.

To avoid the costly and predictable art-swapping method for creating destructible objects, LucasArts began researching simulation-based destruction. Pavis and other senior engineers discovered a company, Pixelux Entertainment, whose primary goal was this type of simulation. Pixelux had developed a real-time physical simulation technology referred to as Digital Molecular Matter technology (DMM). Similar to the way NaturalMotion uses euphoria to create on-the-fly procedural animations, Pixelux uses DMM to bring an unprecedented level of interactivity to objects within a gaming environment, making them react as they would in the real world. All in-game objects, such as splintering wood, shattering glass, or swaying organic plants, have material properties that behave realistically—without using a single frame of animation.

The Force Unleashed team immediately saw the potential for using DMM in a game all about over-the-top, highly destructive Force powers. Fortunately, our partnership with Pixelux began just as it was starting to push the boundaries of its early DMM prototypes, and we were able to work closely with Pixelux's engineers to integrate DMM into our engine. We spent many months working with Pixelux on developing powerful tools that would enable our designers and artists to create DMM objects and continually edit their properties to achieve the types of interactive and authenticity desired.

The pipeline for DMM is focused on converting models, such as a tree on Kashyyyk, from 3D assets into fully interactive objects created out of digital matter. An artist begins the process by creating the tree, which is just a shell. The tree has a surface mesh that defines its shape, but no substance or weight. To transform it into a DMM object, a designer or technical artist will create an appropriate material (in this case, a hard wood) and apply it to the object. Designers can adjust dozens of different material properties—all based on real-world physics—that affect the tree's density, resiliency, and strength. Ultimately, designers and artists work together to determine how easily the object is damaged or breaks, if it breaks at all. In many instances, an interior must also be created, so that when the object breaks, the effect looks authentic.

The result is an object that reacts realistically to the forces applied to it in game, with a different, unique effect every time



DMM "JELLY JAR JAR" FROM THE FIRST PUBLIC DEMO

TARGETING INDICATOR EXPLORATIONS
Chin Ko

SCREEN CAPTURES FROM THE ORIGINAL PRE VIS
Force Unleashed Pre-Production Team

The Art of VFX

Visual effects (VFX) play a key part in delivering not only a complete gameplay experience but a complete *Star Wars* experience in The Force Unleashed. Whereas most developers can get by with a library of visual effects created specifically for their games, *Star Wars* games need to uphold a VFX lineage from films that have survived for more thirty years. From the way the lightsaber glows and leaves motion-blurred trails to the bolts that emanate from an E-11 stormtrooper blaster, there's a distinct visual quality associated with *Star Wars*. Even beyond those expectations, the VFX team had the challenge of literally visualizing what the Force would look like when truly unleashed.

The process for developing VFX is as freeform as developing characters and environments, often beginning with short descriptions of a power or effect or early concept art. In nearly all cases, especially when a project is in full development, VFX artists work very closely with game designers, gameplay engineers, and animators to develop an effect that fits the game's overall art direction and will communicate something important to the player.

The key word in the development of The Force Unleashed was iteration. Every effect underwent several revisions to achieve simultaneously the "unleashed" feel while still retaining a strong connection to the films.

As effects were created and iterations generated, more people on the team became involved in the process, especially for the most dramatic effects. Level designers, environment artists, the art director, the project lead, and FX artist could all potentially weigh in on the look and feel of a particular effect. In some cases the FX artist and art director Matt Omernick would agree on a particular direction, but the level designer and project lead wouldn't feel the effect had the impact it needed. In other cases, Omernick and lead environment artist Michael Knight would push for VFX that fit into the environments better, while designers stressed the need to have the VFX more clearly guide the player to avoid certain dangers or interact with specific objects. The most basic effects, such as a blaster bolt (for which there is a huge amount of reference material) may have endured only one or two iterations, but a more permanent effect like Force push went through hundreds of versions.

The FX artists needed a capable tool to help them work their magic to create great effects. However, when the team began working on *Star Wars*: The Force Unleashed, such a tool didn't exist. The artists could create some effects in Zed, but these included basic motion and required spending a huge amount of time creating individual textures. Even with these limitations the artists were able to prototype many of the game's final VFX, providing a guide to their size, scope, color, and visceral impact. The VFX tool did eventually come online, and matured rapidly as the artists used it, ultimately incorporating a wide range of motion tools and advanced shading techniques that enabled their creative talents to bring the Force to life in-game.

"For players, the most exciting parts are going to be the character interactions. When you are attacking, dodging, etc., thanks to our animators, your character is very dynamic and has tons of different things that he can do."

—software engineer Eric Johnston

EARLY CONCEPT OF VADER AND HIS APPRENTICE
Greg Knight

SCREEN GRABS FROM EARLY IN-GAME CINEMATICS

Producing a Cinematic

As games have evolved, the mechanisms for telling a story through the medium have also changed dramatically, from simple text displays to full-blown cinematic experiences and even in-game interactions designed to propel the story forward. In The Force Unleashed, we've used several techniques to tell the story, including cinematics for all of the major story beats (known as "cutscenes"), in-game vignettes that introduce enemies and locations; dialogue to help further develop Juno and the Apprentice's relationship, and even a robust databank that provides fans with backstories and other information on the game's planets and characters. Of all these mechanisms, the cinematics effort proved the most complex, requiring literally dozens of developers—including a large team of animators from ILM—to produce about 60 minutes of high-quality cutscenes.

From the outset, we had several goals with our cinematics:

- To bind the story and gameplay together, providing context and motivation for the player.
- To be economical, and tell as much story in as little time as possible.
- To have character performances drive the experience, rather than lots of exposition and dialogue.
- To have the cinematics feel like *Star Wars*, with great storytelling and compelling characters.

Cinematic director Marty Stoltz first worked with a storyboard artist to develop all the shots for a particular scene, blocking out the actors, and plotting how the action would play out. During this initial process, Stoltz would thus get a sense of how many shots would be needed to complete a sequence. In the most cost-effective way, it also showed the team exactly what the scene would look like once assembled.

From the storyboard phase the team would move on to the 3D animatic (or layout) phase, further blocking out the action and placing the "actors" in a 3D set. Stoltz and his team would play with the speed of the action and the movement of the characters to establish the right pace for the scene. Character models would be inserted in rough poses, and camera angles would be refined. While the voice lines used for the storyboard phase were often a mixture of real tracks recorded by the actors and "scratch tracks" quickly recorded by a team member, the animatics phase required the final (and in many cases processed) voice lines to establish accurate timing.

Layouts often endured far more revisions and edits than storyboards or the final animation as we tweaked timing, line delivery, camera angles, and cuts. We even made dramatic revisions to scenes at this point, rewriting whole dialogue exchanges to improve the overall flow of the story.

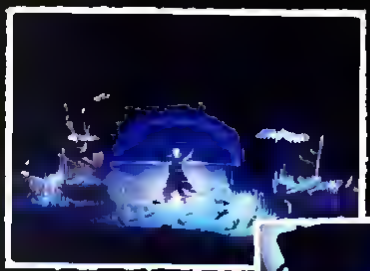
Most of our production requirements were also identified during the layout phase. In storyboards, it was sometimes difficult to know how much of a given virtual set we would need to build, how many individual visual effects we would need to "sell" the scene, or how the scene should be lit. All of these issues were part of our discussions when approving layouts.

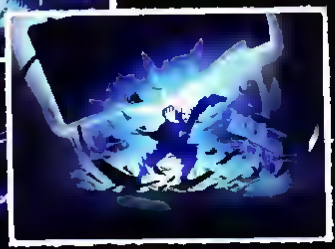
The next phase involved producing final animations based on the layouts, focusing on the body and facial movements of the characters. We spent a great deal of time on the key performances for the Apprentice, Juno, and Kota, working hard to convey emotion through body language, head and eye movements, a glance, or an expression. Subtle facial movements—a quick brow furrow, a small twitch of the cheek, or a tic—were also added at this stage.

After Stoltz and his crew finished their animated sequence, the scene would be handed off to lead audio designer David Collins and his team to provide a rough sound mix and score. This process involved ensuring that the levels (the volume of each line of dialogue) were set appropriately; they would also do a first pass of all the myriad sound effects (SFX) needed, including ambient SFX. sounds the environment makes naturally—an engine room might have a low hum, while a Felucian jungle might be marked by animal noises, rustling foliage, and wind. Music would also be applied to the scene, drawing from all of John Williams' *Star Wars* scores, along with over an hour's worth of original music composed by Mark Griskey specifically for The Force Unleashed.

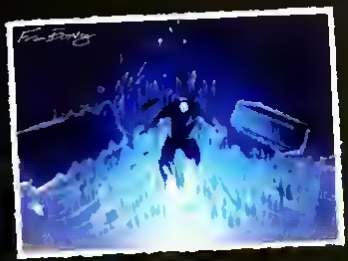
While the sound crew was hard at work scoring the scene, environment artists would work on the sequence as well, providing final lighting and visual effects. We would also do quite a bit of rerecording during this phase, bringing in the actors and asking them to perform their lines while watching the cinematics. Sometimes the lighting, animation, or music would inspire a different delivery or energy level for a line.

Once the temp audio track and the final lighting, animation, VFX, and other elements were approved, we would render out the scene and review it one final time for any artifacts or small changes. An approved render would then make one last trip to the audio department for a final polish pass and the final music tracks.





FORCE ENERGY EXPLORATIONS
Chris Voy



Mo-Cap: Changing the Face of Game Acting

Production Diary #5

September 2007

Over the years, LucasArts has used a variety of methods to bring actors into video games. The most common is the lip-sync performance—where the actor's voice is captured and married to the animation of his or her digital character. In the mid-1990s, we dabbled in full-motion video—known as FMV. The *Star Wars: Rebel Assault* and *Jedi Knight* games, where actors, fully dressed in costume and makeup, shot their parts in front of bluescreen or greenscreen to become the characters in digital sets during the making of the games. The Force Unleashed took a very different approach to its lead character, one that emerged from LucasArts' ongoing relationship with Industrial Light & Magic.

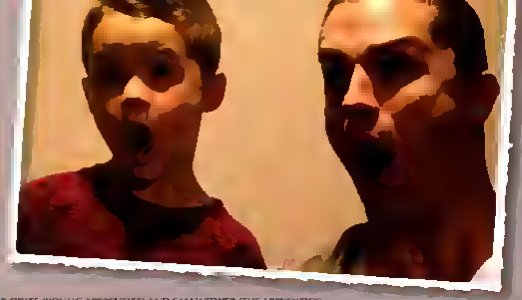
The experience and insights ILM gained on films such as *Pirates of the Caribbean: Dead Man's Chest* have been invaluable. Likeness capture gathers the contours and textures of a performer's face for the creation of a digital model. The facial motion capture (mo-cap, for short) data can then be used to animate that model. When Darth Vader's Secret Apprentice speaks, you'll hear Sam Witwer's voice. When he smirks or scowls, you'll see Witwer's expressions . . . but you won't necessarily see Sam. You'll be seeing his performance, digitally captured and applied to a model that bears his digital likeness. It's very much like how you "see" Bill Nighy as Davy Jones in the *Pirates of the Caribbean* movies. It's a new approach for LucasArts, and it affected the way we handled casting for The Force Unleashed.

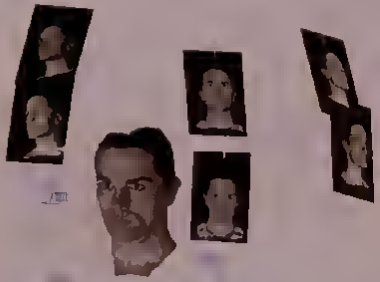
In previous games that featured only vocal acting performances, it really didn't matter what the actor looked like, or whether or not their faces were expressive as they spoke. Age and even gender also didn't necessarily matter, as actors would often be called to voice characters much older or younger than their real ages, or women were often cast as the voices of young boys. We had to disregard such precedent once we knew that mo-cap and likeness capture would imbue our lead characters with life. While previous-generation games did a lot with their character animation and dialogue, this next-generation approach will achieve unprecedented subtlety of expression and nuance of performance. Now a single look can speak volumes.

—W. Haden Blackman

CULLY FREDRICKSEN (GENERAL KOTA) PREPARING FOR CLONECAM CAPTURE SESSION

ADRIENNE WILKINSON IN MAKEUP AS MARIS BROOD DURING CLONECAM SESSION





ZEB DIRTES (YOUNG APPRENTICE) AND SAM WITWER (THE APPRENTICE) REHEARSING BEFORE CLONECAM SESSION

CloneCam

After writing and editing the script for The Force Unleashed, we were determined to cast the right actors for each part. The search was difficult because we wanted to use innovative likeness-capture technology to help build our in-game and cinematic characters, so we needed actors who didn't just sound the part, but also looked right for the roles.

The cornerstone of the likeness capture process was ILM's CloneCam technology, which ILM uses in films to generate photorealistic doubles. The CloneCam technology uses six cameras to capture synchronized still photography images of an actor's head. From only a few photographs, ILM can triangulate each point on the actor's head and reconstruct his or her likeness. The actor poses in front of the camera and makes various facial expressions, such as a scream, frown, smile, or surprised look, and from that ILM acquires a "shape library" of facial expressions. Finally, during the shoot, ILM also captures beauty lit textures to produce polarized and non-polarized texture and color information of the actor's head.

The CloneCam technique is superior to other likeness capture methods because it can recreate the actor's "geometry" and facial structure in an instant, allowing for extreme expressions. This allows us to produce a more bio-mechanically accurate head, giving our faces a more lifelike appearance. From all this data, we were able to create a high resolution 3D mesh and detailed facial texture to rebuild the actor's head in game.

The actor's likeness is only one part of creating our characters. The second component is the actor's actual performance. Again, we leveraged ILM expertise to acquire motion capture data during recording sessions. While performing, our actors wore over 100 reflective markers on their faces. The movements of these markers were recorded by more than a dozen infrared cameras positioned at various heights and angles. The data collected from these cameras could be mapped to our character's heads, providing a base set of movements for animators.

Bringing Balance to the Force
Chapter Six

PREVIOUS PAGE:
MORS WOOD AMBUSHES THE APPRENTICE
IN THE BANCOR GRAVEYARD
Amy Beth Christenson

EARLY BAXUS PRIME CONCEPT
Greg Knight

UNLIKELY EXPLORATION: OBI-WAN COMMUNES WITH QUI-GON JINN
Greg Knight

Milestones

During the development of The Force Unleashed the team worked a rigorous schedule of major checkpoints and milestones. The latter occurred roughly four to six weeks apart. While each milestone was very different depending on our ultimate goals, all shared some common features.

One of the biggest challenges we faced was keeping the large team moving forward toward common goals. We therefore designed each milestone around a specific pillar, usually based on what we wanted a player to experience when picking up the controller.

- **One-Week Planning Phase:** The entire development had a master schedule, but with each milestone we discovered possible new gameplay setups, learned more about the capabilities of the technology and the team, and refined our internal processes. In order to remain nimble from month to month, we spent the first week of every milestone reassessing our pillars to see if they still made sense based on the current direction of the game. After writing detailed descriptions of the "player experience," we prioritized tasks as necessary to ensure we achieved our goals.
- **Morning Reviews:** Given the amount of work being done on a daily basis, it could have easily taken weeks for the team leadership to see a specific piece of art, an enemy behavior, a gameplay setup, or any other element of the game. To avoid this, in late 2006 we instituted morning reviews, modeled in part after ILM's "dailies"—during which visual effects shots are reviewed and critiqued. Each morning, a small cross-section of the team spent ninety minutes evaluating a handful of levels, providing feedback, identifying bugs and other issues, and sharing new content.

Beyond these core features, each milestone evolved differently, with varied significance to the team.

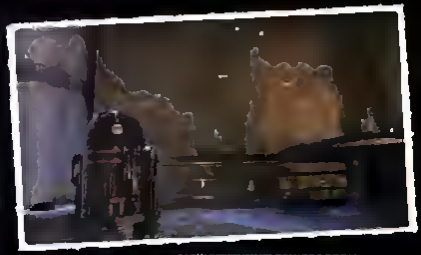
EARLY SCREENSHOT OF INVASION OF KASHYYYK

Greenlight Milestone

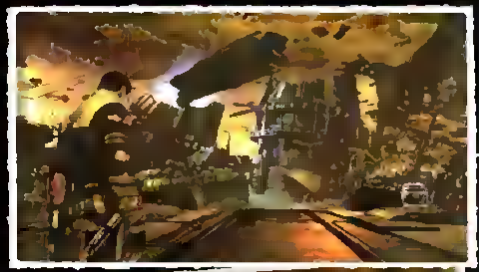
Our Greenlight Milestone (GLM) was the first milestone around which the entire team rallied. The goal of the milestone was to prove that we could actually build a game by providing a few minutes of core gameplay. Our mission called for the player to be able to traverse a small section of the planet Felucia, fighting several enemies while using the environment to his advantage.

Delivered in December 2006, the GLM was successful in driving forward the in-game renderer, which was required to display the environment. We also implemented the Apprentice's core Force powers and basic lightsaber attacks; created enemies who could navigate the environment and attack the player; introduced a "giant" character into the game (in this case, a rancor); and integrated both Digital Molecular Matter (in the form of stone columns, which shattered on impact, and rubbery mushrooms) and euphoda, which provided our Felucians with more authentic reactions. We even slipped a few Holocrons into the levels to reward players who explored a bit.

With the GLM, we proved that we had a foundation for building the game, and began to overcome some of the design and technology risks. However, we were a far cry from making the game *fun*. Enemies took too long to defeat, the player didn't have enough variety in his attacks, and there were no big "wow" moments. Most important, while the environment looked gorgeous, it wasn't nearly interactive enough.



EARLY SCREENSHOT OF VAPOR ROOM

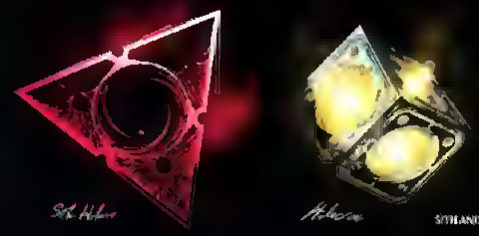


EARLY SCREENSHOTS OF RAXUS PRIME

First Playable Milestone

On the heels of the GLM, we focused on broadening our gameplay experience with the First Playable Milestone (FPM). We again wanted to provide a portion of an in-game environment (this time, the first few areas of the TIE Fighter Construction Facility), but were focused on making that environment much more interactive and destructible.

The FPM, delivered in early February, just six weeks after the GLM, was a major leap forward for the team and showed the true potential of The Force Unleashed concept. The player had a larger arsenal of powers and combos, which he could use to topple catwalks, toss around exploding barrels, hurl enemies into chasms and other environmental hazards, and even blast through thick metal doors as if they were paper. The FPM also had several big "wow" moments—the player could use the Force to grab and toss around TIE fighters, for example. Finally, we introduced the game's currency: The player was rewarded with Force Points for defeating enemies, earning more points if enemies were defeated using combos or the environment.



SITH AND JEDI HOLOCRON CONCEPTS
Chris Voy

We did fall short in one key area. Unfortunately, our first attempts at an unleashed battle against Kota did not feel epic or compelling. Over time, we identified the game's default camera as part of the problem. The default camera is a third-person camera. Placed directly behind the Apprentice, it gives the player control over the camera to look at or target virtually anything in the environment. This camera works well when fighting groups of enemies, but players found it difficult to keep track of the fast-moving Kota. In addition, the third-person view did not capture the scope and scale of the environment or Kota's powers. Over the coming weeks, we would eventually decide that most fights with a Jedi or similar character would have cameras specifically designed to keep the Apprentice's opponent onscreen at all times, and to showcase the environment and the enemy's impressive abilities.

Looking Next-Gen

FPM had helped to define our core gameplay, next we needed a milestone that could set the art quality bar high and ensure that we could deliver beautiful *Star Wars* environments. The major focus of the Looking Next-Gen milestone (LNG) was the creation of two shippable environments. To help drive some of our lighting solutions, we selected two interiors – an infuser room aboard the TIE Fighter Construction Facility and the Death Star Pulsanum.

As with the preceding milestones, LNG proved incredibly difficult, but was also very rewarding. The tight focus on two environments did help advance our game engine and renderer. The resulting environments became our first showcase rooms, and the first locations suitable for use in screenshots and other press materials.

While this was primarily an art milestone, we continued to develop and refine the core gameplay mechanics, working especially hard to revise the climatic Jedi battles.

EARLY FELUCIA SCREENSHOT

E3 Tech Demo: The Idea Takes Shape

In April 2006, The Force Unleashed team faced the biggest test yet: assembling a representative reel of the game for one of the industry's major events, the Entertainment Electronics Expo, or E3. The game was still in early development, and we were focused largely on developing tools and a production pipeline. We had rough combat prototypes, but no real game environments. The design was still evolving, the script was not complete, and the team was only twenty people strong. However, we did have the beginnings of a working engine, which already incorporated the first iteration of our next-generation renderer, DMM, euphoria, the Havok physics system, and basic AI and character animation. To showcase what we had built so far, we decided to focus on a Force-playground that would allow us to hurl stormtroopers and R2 units into glass airplanes, wooden beams, stone statues, and even destructible metal objects.

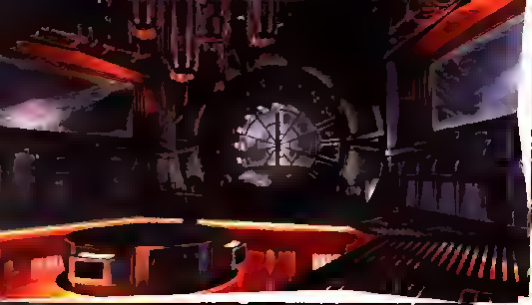
The demo started off with a simple wood demonstration, illustrating how the wood was created, followed by a texture swap to show it cut in half. No matter how many times the wood was struck by any type of force, it always produced the same result. Then, using Pixelux's DMM technology, the team was able to show how wood would break in The Force Unleashed. Depending on the angle and velocity of the object being hurled at the wood—in this case, R2D2—the wood would break and shatter uniquely every time. The demo also showed off other DMM effects in the form of a huge rancor skeleton. Viewers saw that DMM objects could interact with one another—i.e., knocked-off pieces of the rancor skeleton would occasionally strike other objects, like stone columns, and destroy them, too.

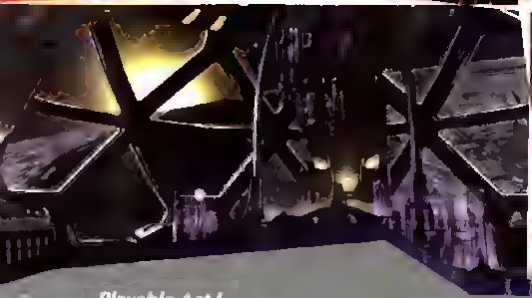
Next the team showed a brief demonstration of NaturalMotion's euphoria in action. We took some stormtroopers and hurled them at plywood beams with edge taps. A falling stormtrooper would try to grab onto the edges of the beams as if to stay alive, showcasing his simulated central nervous system.

Lastly, the team showed a small sliver of one planet, Felucia, to show off DMM soft-body tech. Each plant created would move, bend, and sway in its own way, depending on the force applied and its direction. This portion of the demo also illustrated how plants of various shapes and densities would move differently from one another.

"The most important milestone for me was first playable. At that point it had been a year and a half of our lives. It was a relief more than anything else....Just seeing that nugget of, 'Hey, this is fun! We're all on the right track!'"

—lead systems designer Rich Davis





LEFT:
EARLY SCREENSHOTS OF STAR OBSERVATION DOME

ABOVE:
EARLY SCREENSHOTS OF FELICIA

Playable Act I

After LNG, we spent [redacted] the connective tissue [redacted] user interface (UI) [redacted] to upgrade powers and [redacted] costumes, and other systems. [redacted] the team continued to build levels, produce art, integrate advanced Force powers, and incorporate additional gameplay setups. Unfortunately, as summer 2007 approached, we began to feel our momentum slowing. With all the new code and content being introduced, the game became increasingly less stable, and many areas needed more excitement.

To refocus the team, we defined our next milestone as Playable Act I, meaning that the player could play from the beginning of the TIE Fighter Construction Facility level through the climactic fight with Jedi Master Shaak Ti, experiencing some semblance of every major encounter, event, and cinematic cutscene.

The Playable Act I milestone became our most difficult milestone, yet was ultimately successful. We were able to bring together dozens of systems and pieces of content, some of which had been developed in relative isolation. The milestone also drove huge improvements in stability, which was necessary to ensure the game could be played level to level without frustrating crashes. It forced us to sort out important details related to the game's general flow, lock down level layouts, and finalize cinematic storyboards and layouts.

Perhaps most significant were the many improvements to the Jedi fights. Using what we had learned from the FPM, we rebuilt the confrontation with Kota from the ground up, giving him big powers such as a massive repulse. By the time we began the Shaak Ti duel, we knew that the environment should play a significant role, and even early block outs of this fight included the Sarlacc as a major threat to the player.

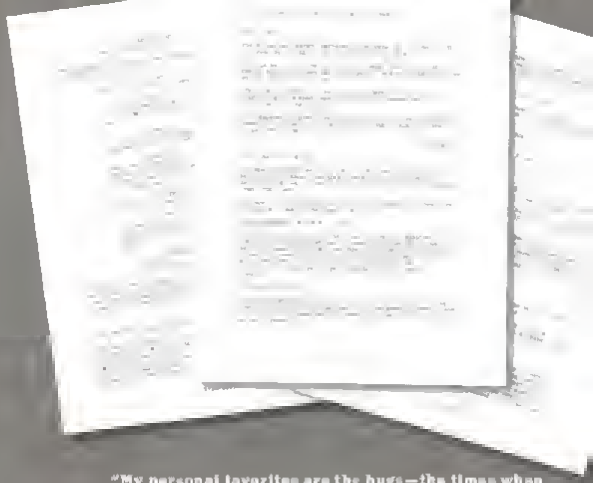
Playable Act I also gave us the opportunity to evaluate the game more critically. As part of the planning week after the milestone, we forced the entire team to play the game and provide detailed notes on their experiences. The feedback was sobering, but incredibly valuable. Players had difficulty navigating the environments, figuring out what to do next, and controlling the character. Enemies didn't seem dangerous: there was little sense of progression as the Apprentice grew more powerful, and the gameplay often became repetitive. As with the GLM, environments weren't nearly interactive enough. In the aftermath of this milestone, several environments received complete overhauls, with geometry and gameplay setups changing radically to address the team's major criticisms.

Playable Acts II & III and Playable Critical Path

The success of the Playable Act I milestone encouraged us to follow it with two more milestones with the goal to further the content. First, we added [illegible] working extremely hard to keep Act I stable. Next, we added the Prologue and Act III—the final components needed to allow someone to play through the game's complete critical path from beginning to end—again with an emphasis on keeping the rest of the game stable even while the team was frantically incorporating new content.

By bringing the game together in this way, we were able to identify the gameplay spaces that would require the most work to become fun and engaging. We often redesigned, replaced, or outright removed these areas, sometimes excising huge tracts of the environment to focus our efforts on the regions that we knew would be most entertaining. We also identified the need for more connective tissue between the levels, more dialogue to help guide the player, and more "wow" moments in each level.

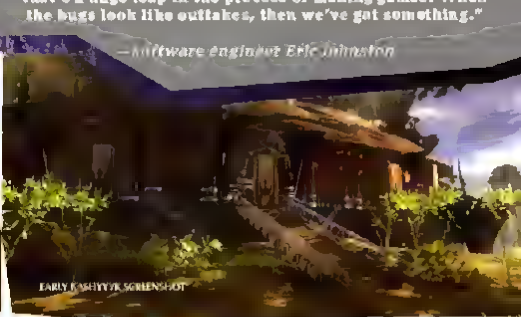
We recognized that the Prologue in particular felt like an afterthought rather than a fully realized experience. We focused heavily on revamping the Prologue over the next several months, adding more suggestions that the action is occurring amid a major battle and integrating the fight against the Exiled Jedi at the level's conclusion.



"My personal favorites are the bugs—the times when you come up to a heavily armored stormtrooper and he sees you, you see him, and you're preparing your attack, and then he starts waving his arms and sits down. To me that's a huge leap in the process of making games. When the bugs look like outtakes, then we've got something."

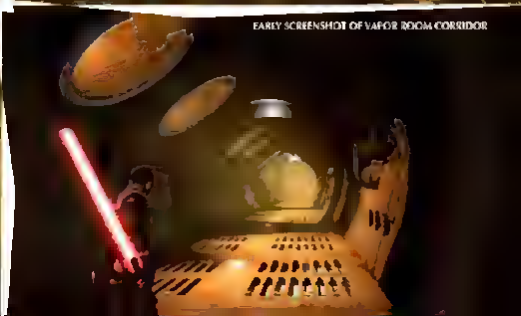
—software engineer Eric Johnston

EARLY KASHYYYK SCREENSHOT



EARLY KASHYYYK SCREENSHOT

SHAAK TI MODEL
Craig Mullins



EARLY SCREENSHOT OF VAPOR ROOM CORRIDOR

CONCEPT ART FOR THE "NATURAL HISTORY MUSEUM" BUILT FOR THE E3 DEMO
Greg Knight

EARLY-PRODUCTION SCREENSHOT

BANCOR SKELETON FROM THE E3 DEMO

Systems and Art Complete

In late September 2007 the team celebrated the completion of the Systems and Art Complete milestone. The goal of the milestone was to integrate the remaining art and gameplay systems, giving the designers a stable foundation upon which they could build each level's gameplay setups and encounters.

The push to achieve this milestone was intense. For some artists, it would be their final milestone working on The Force Unleashed and their last chance to get a piece of art into the game. Many areas went from being placeholder, untextured "gray box" geometry to full-fledged next-gen environments in the span of a few weeks. The number of DMM objects in the game nearly tripled, providing some of our most impressive environmental interactions, such as giant Sarlacc teeth that can be ripped from the Sarlacc's rubbery gums and thrown at enemies.

A handful of major systems also came online at this point. By the end of the milestone, players had the ability to save and load a game, could use the mini-map and much of the in-game UI, and found themselves battling more varied AI. We continued to refine the Force powers, added new automatic blocking, and dramatically changed the controls for Force grip.

Alpha

By all accounts, Alpha is the most difficult milestone for any project at LucasArts. The company's definition for Alpha is stringent. The game must be Code and Content Complete and include no crashes or other bugs that prevent the player from playing through the game's critical path.

After spending weeks cramming a huge amount of content and code into the game, most of the team needed to transition into the mindset of fixing bugs and optimizing the code and content. However, the designers still had a huge amount of work to do in order to finish populating the game with background characters and setting up the key encounters.

The team worked harder than ever before to achieve Alpha. Every day we met with our internal test teams to prioritize bugs, ensuring that we worked on the most difficult issues first. Feedback from focus testing enabled us to identify the game's remaining issues, from unclear objectives to enemies who were too difficult to defeat.

EARLY FORCE REPULSE CONCEPT
Greg Knight

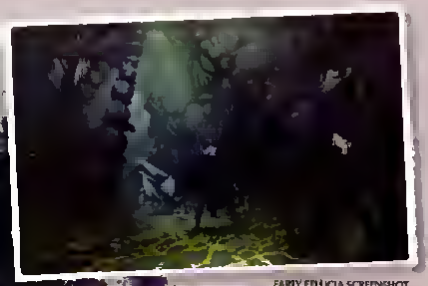
From Alpha to Launch

Due to the nature of publishing deadlines, we are screaming toward the game's launch as we write this. The period between Alpha and launch is focused primarily on tuning, polishing, and fixing additional bugs. While we aren't introducing any new content or features at this point, the team remains fairly large. Bug hunting is a difficult and time-consuming endeavor that requires a full engineering team. We also maintain a large art team to continue polishing visual effects, lighting, and animations. Our final cinematics will not be finished until late in 2007, and we are still adding new sound effects and integrating over sixty minutes of original music.

Designers and engineers are also fine-tuning every fight, from the one-on-one duel against Kota to an encounter with an entire squadron of stormtroopers. The size of Force points rewards and the game's difficulty curve—the manner in which the game's challenge level progresses from the first to the last—will be massaged until the last possible moment. Across every area of development, we continue to seek the most compelling gameplay experience.

For those of us who began on the project in August 2004, the past three years have been among the most difficult and rewarding of our professional careers. We still remember well the long months spent trying to lock down the game's concept, and the many milestones that followed during which we tried to cobble together the ideal gameplay while still building our foundation tools and technology. Now that we are finally able to focus on small details rather than massive challenges—on polishing the game rather than firefighting, on honing encounters rather than just getting something to work in the first place, making this game is starting to be *fun*. We are able to spend hours actually *playing* Star Wars: The Force Unleashed.

And while we are always looking for ways to make the game better during these final days, we often find ourselves humbled by the opportunity we have been given—the chance to create the next chapter of the *Star Wars* saga—and we remain hopeful that we have crafted an experience that feels true to *Star Wars*, delivers on the promise of the original "Force Unleashed" vision, and, most important, is as rewarding to play as it has been to build.



EARLY FELUCIA SCREENSHOT

"These canyons are where the tree roots need to be, and the Imperials created these fire pits and threw everything inside. There are some signs of imperial rule like the spotlights in the background and imperial structures."

—concept artist Stephen Chang

KASHYYYK UNDER IMPERIAL RULE
Stephen Chang

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Special thanks to George Lucas.

May The Force Be With You.

RAXUS SCAVENGER CAMP
Chris Voy

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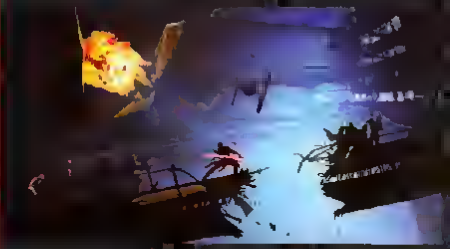
Brett Rector, assistant producer at LucasArts, was editor-in-chief of *Star Wars® Insider* magazine, *Vader: The Ultimate Guide* and *Star Wars Revenge of the Sith—Official Episode III Souvenir Movie Guide*. He is also co-author of *Armored Core 2: Another Age: Prima's Official Strategy Guide* as well as other game-related books and articles.



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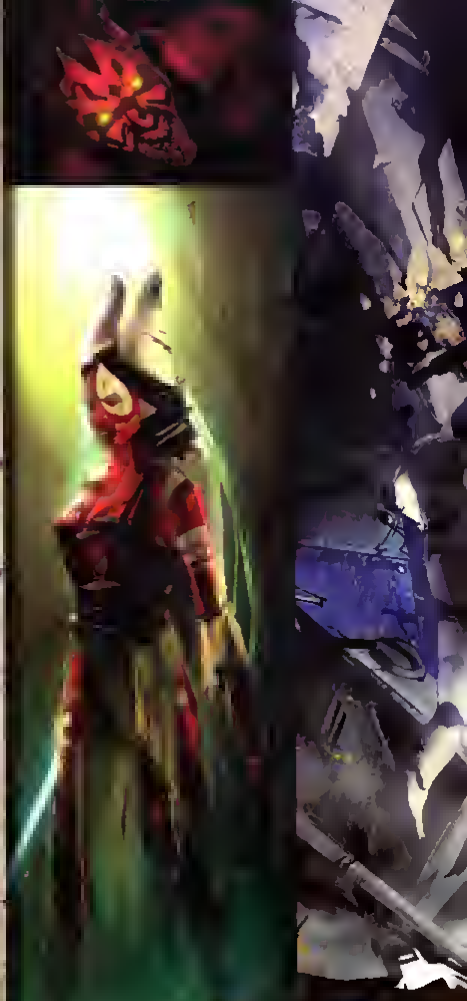
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